

FIG. 1

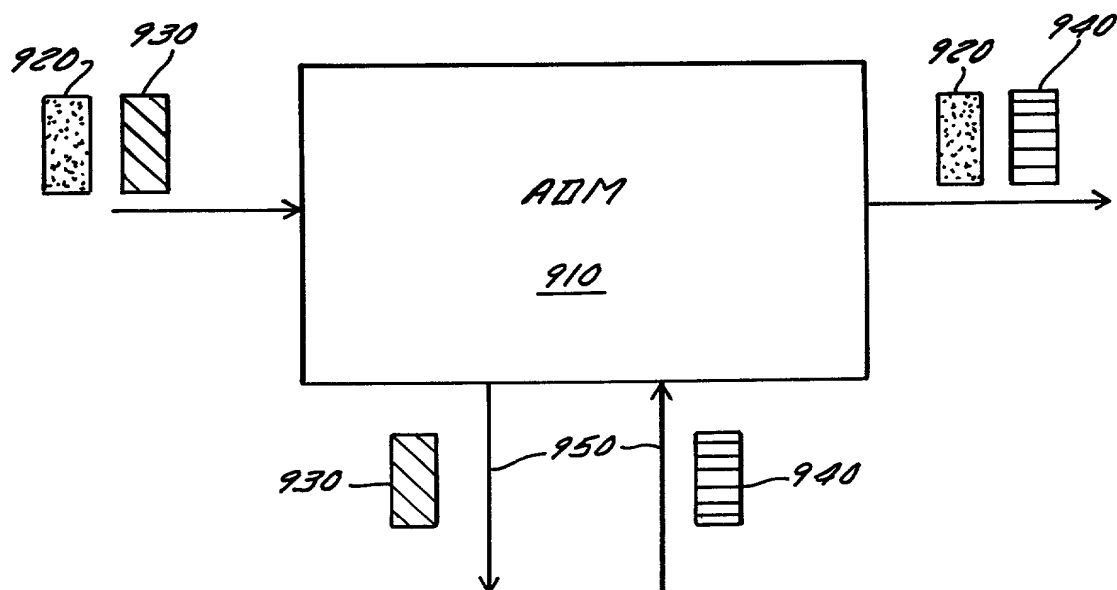


FIG. 9

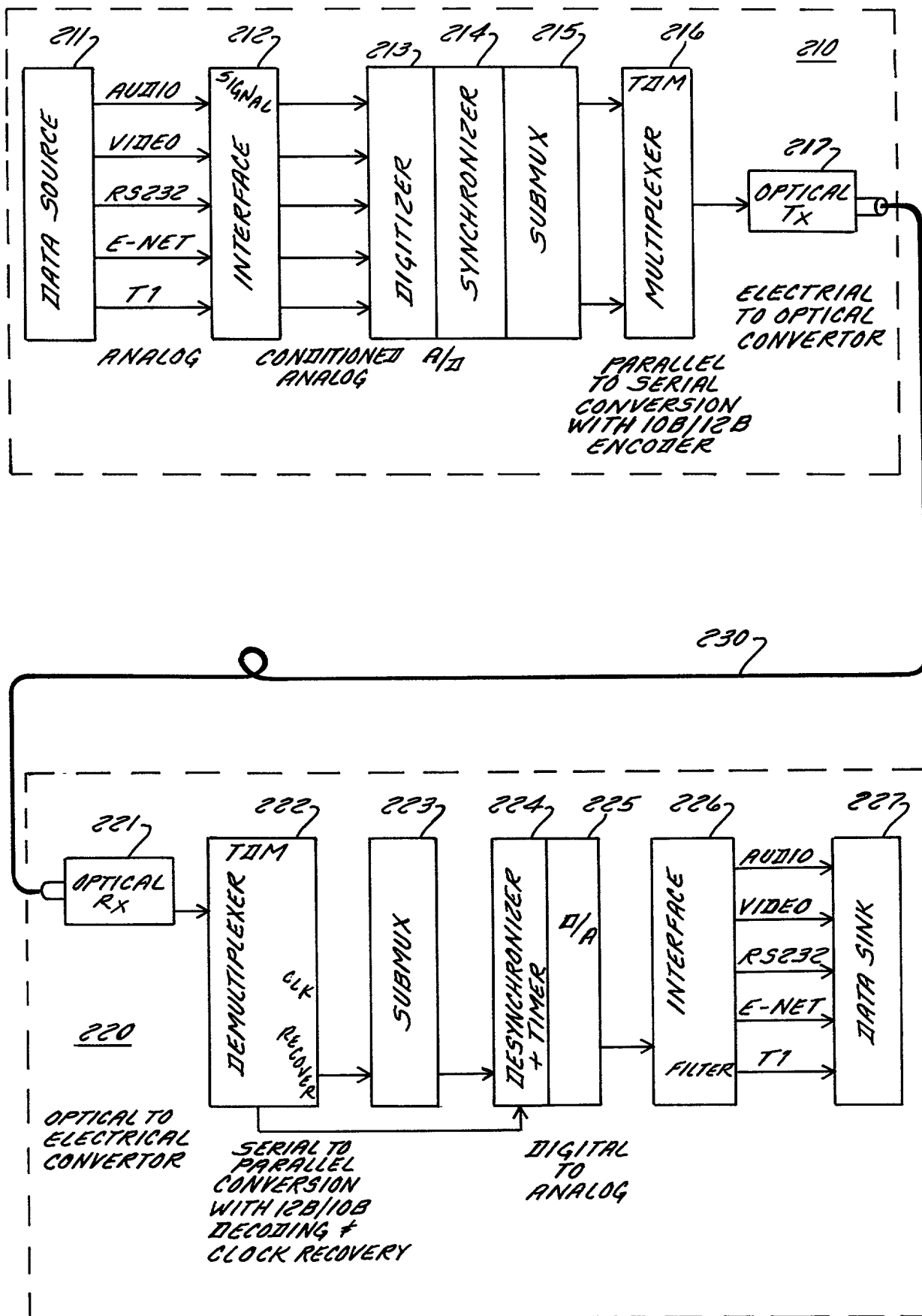


FIG. 2

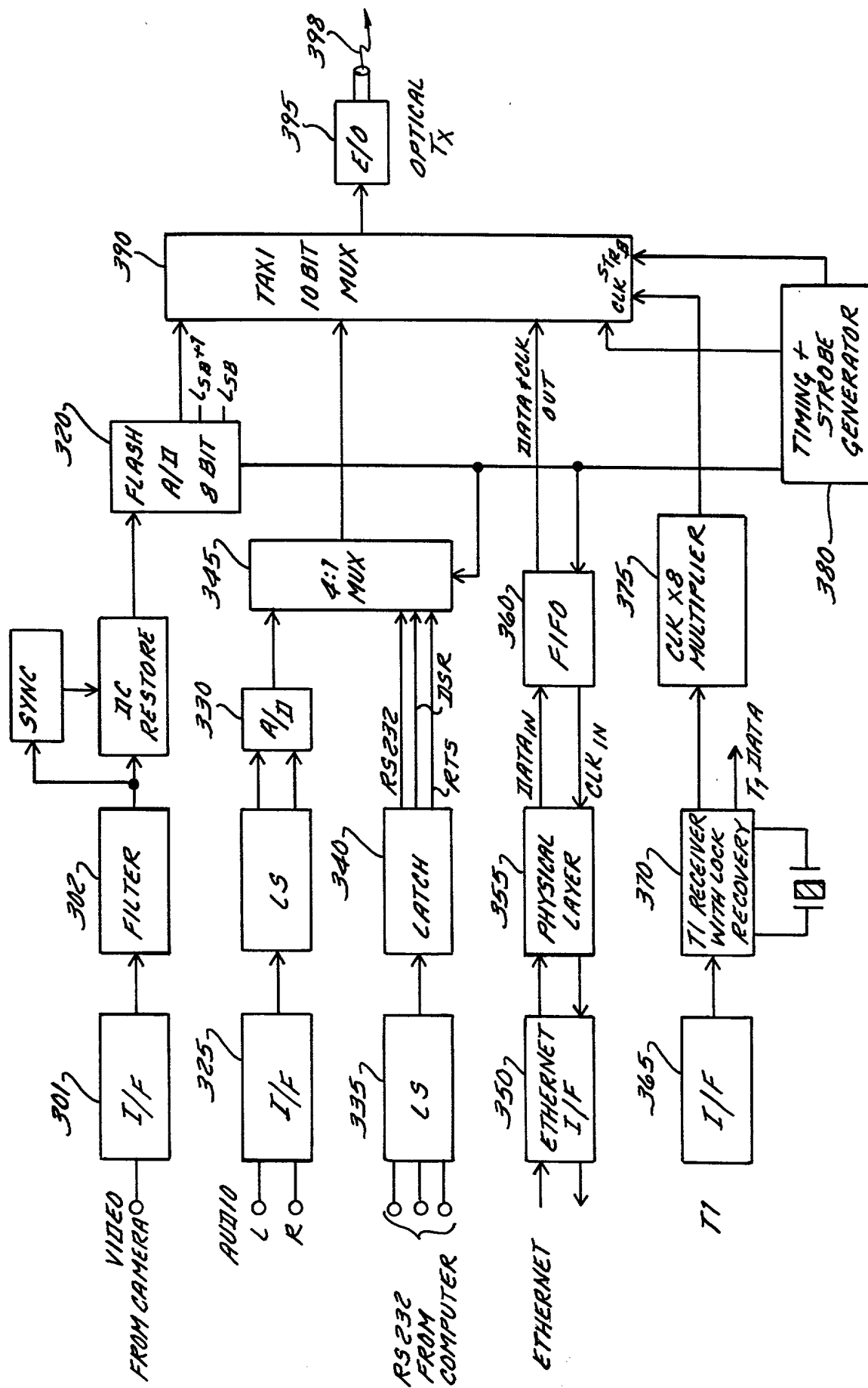


FIG. 3

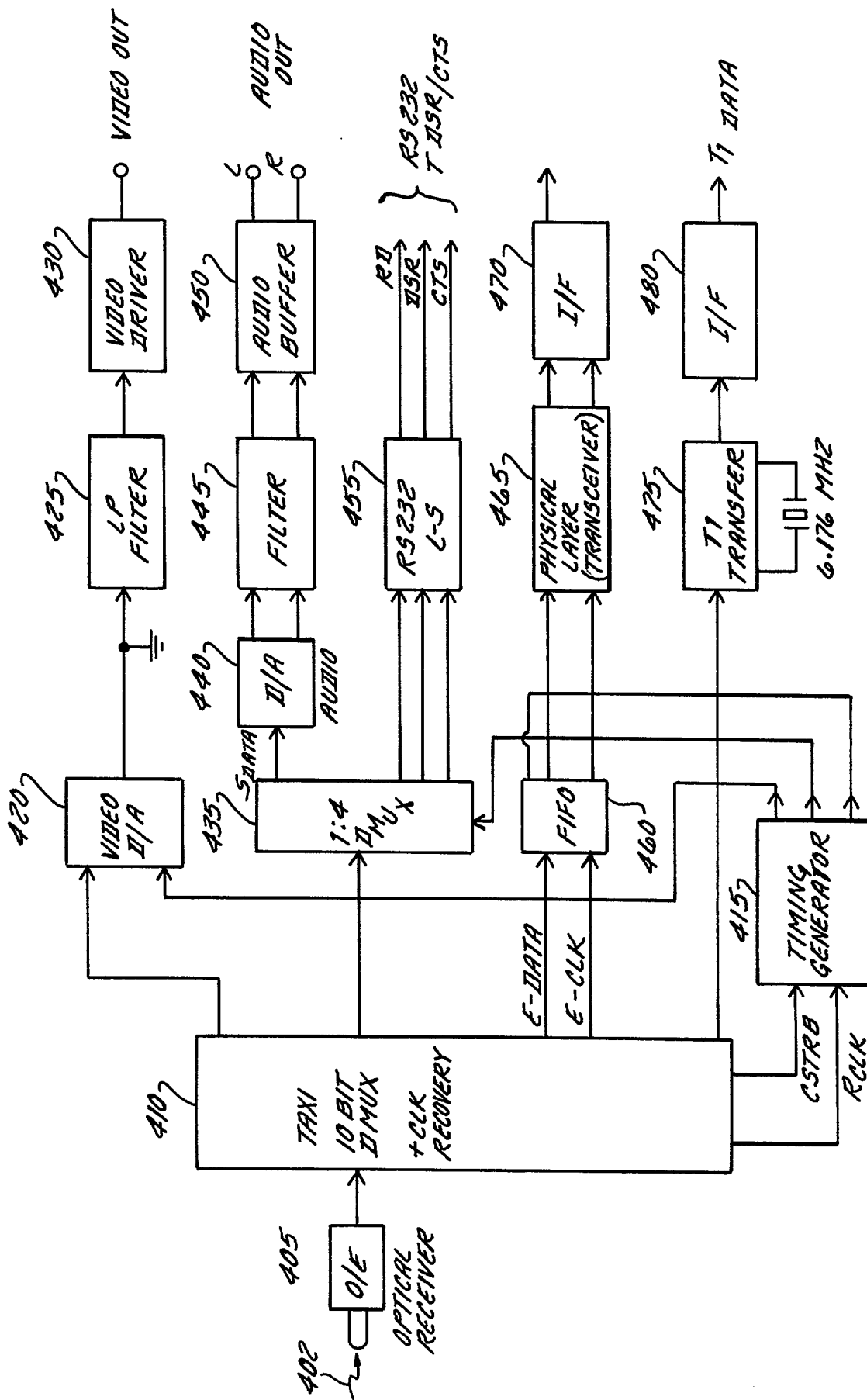


FIG. 4

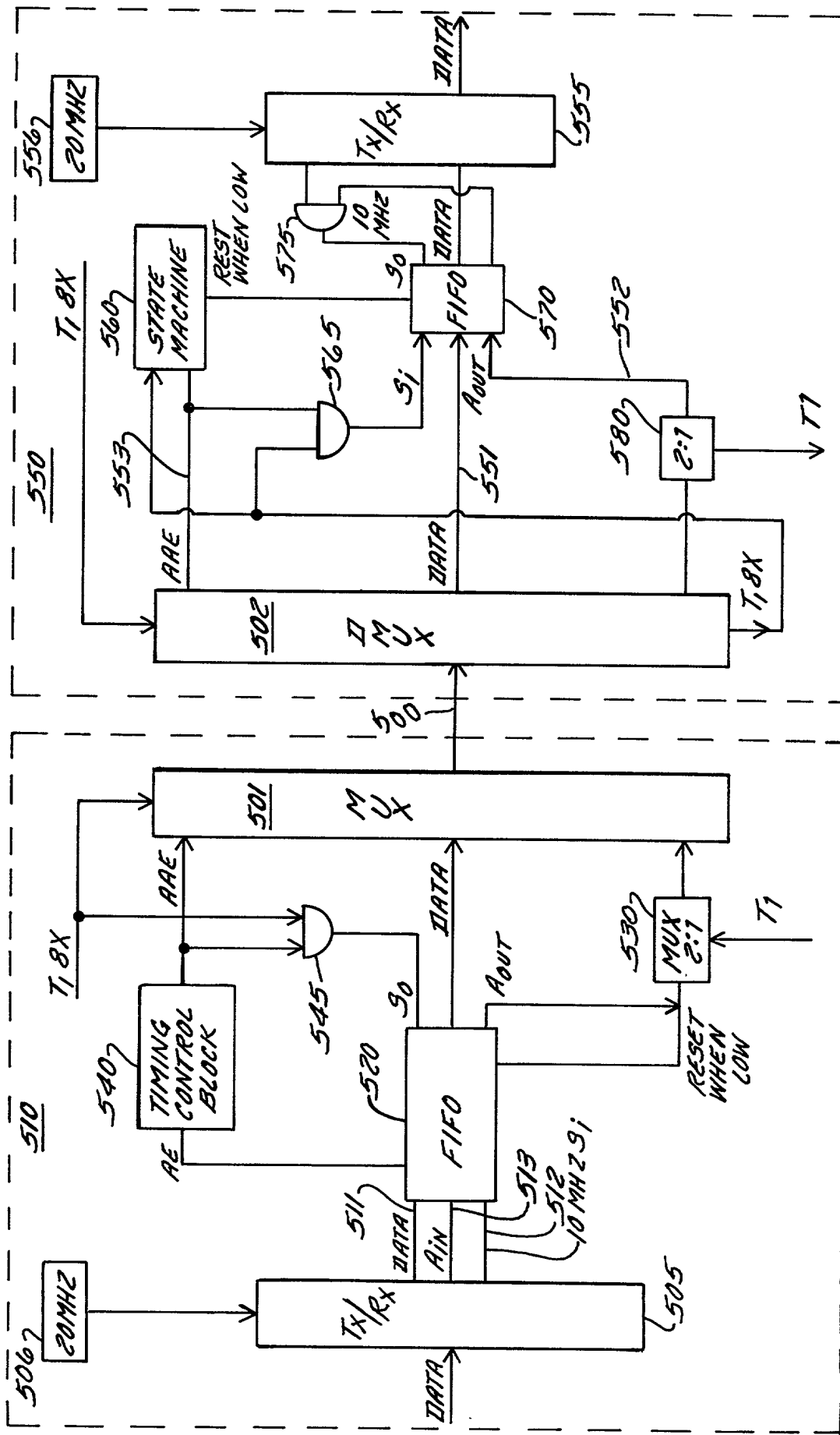


FIG. 5

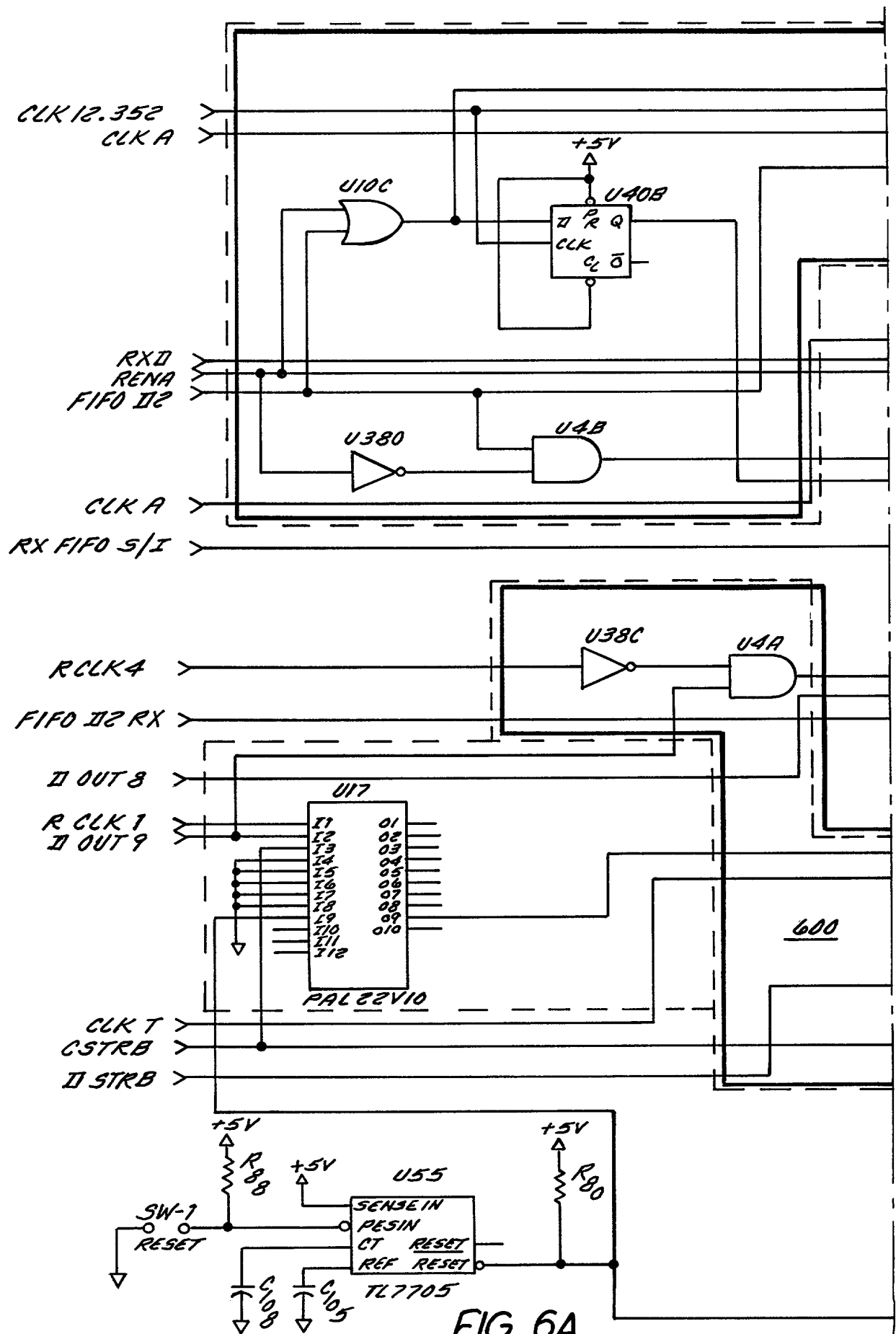


FIG. 6A

FIG. 6B

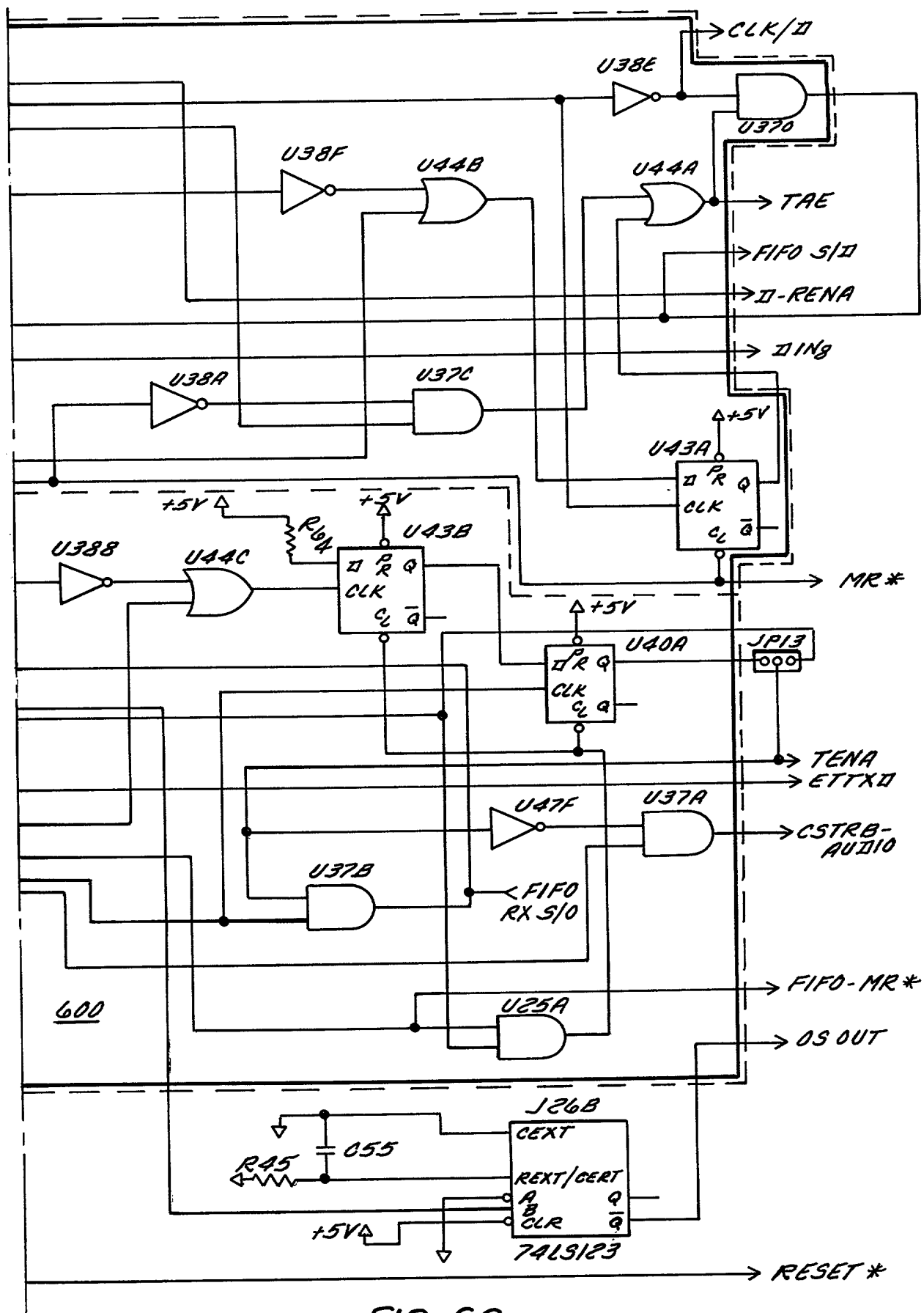


FIG. 6C



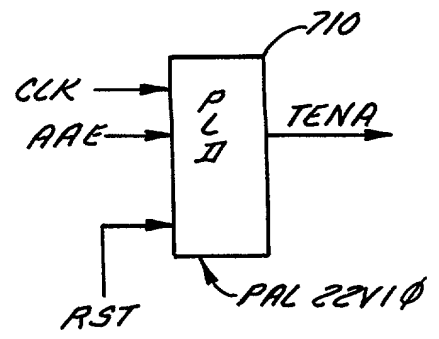


FIG. 7A

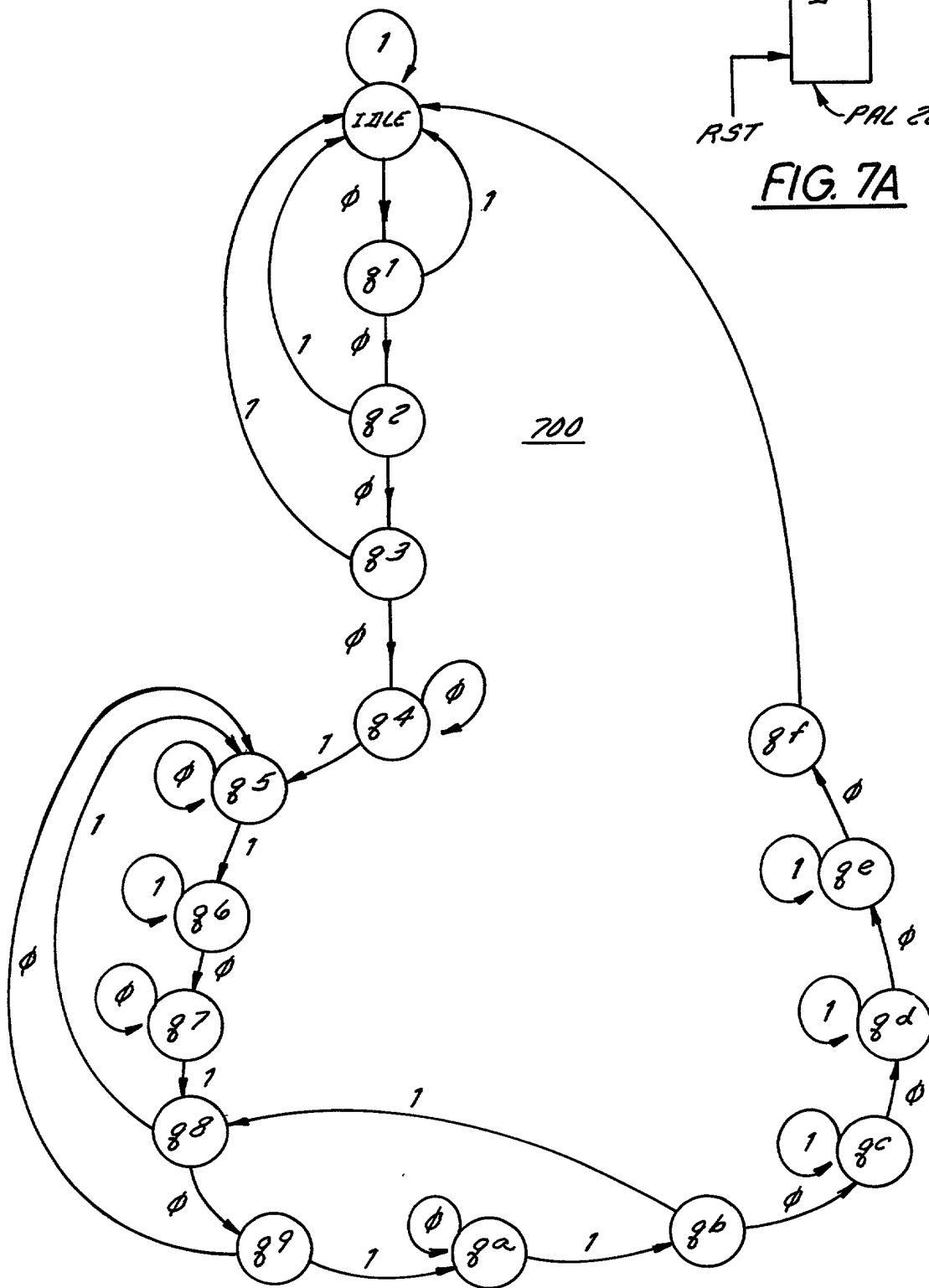
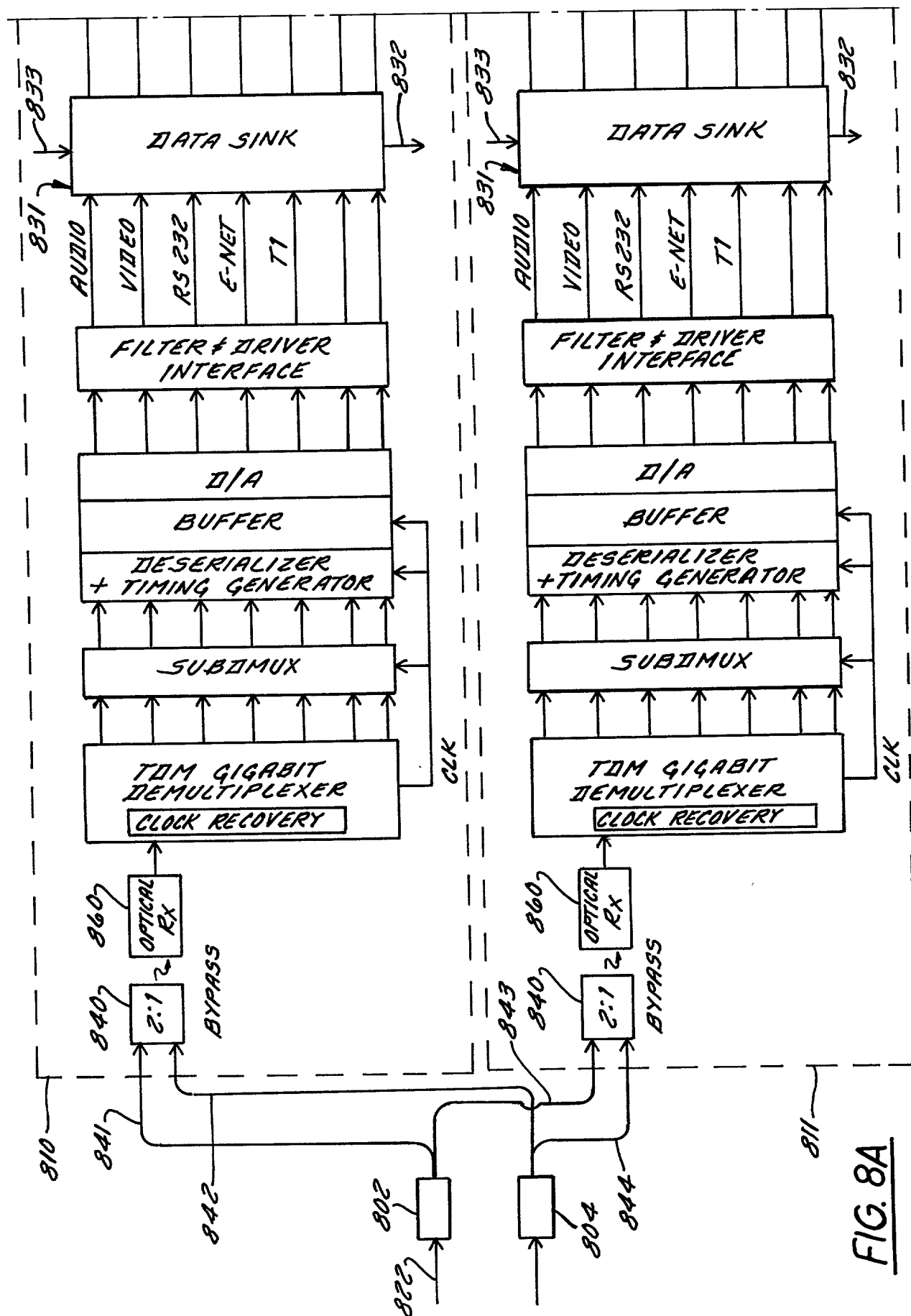


FIG. 7B



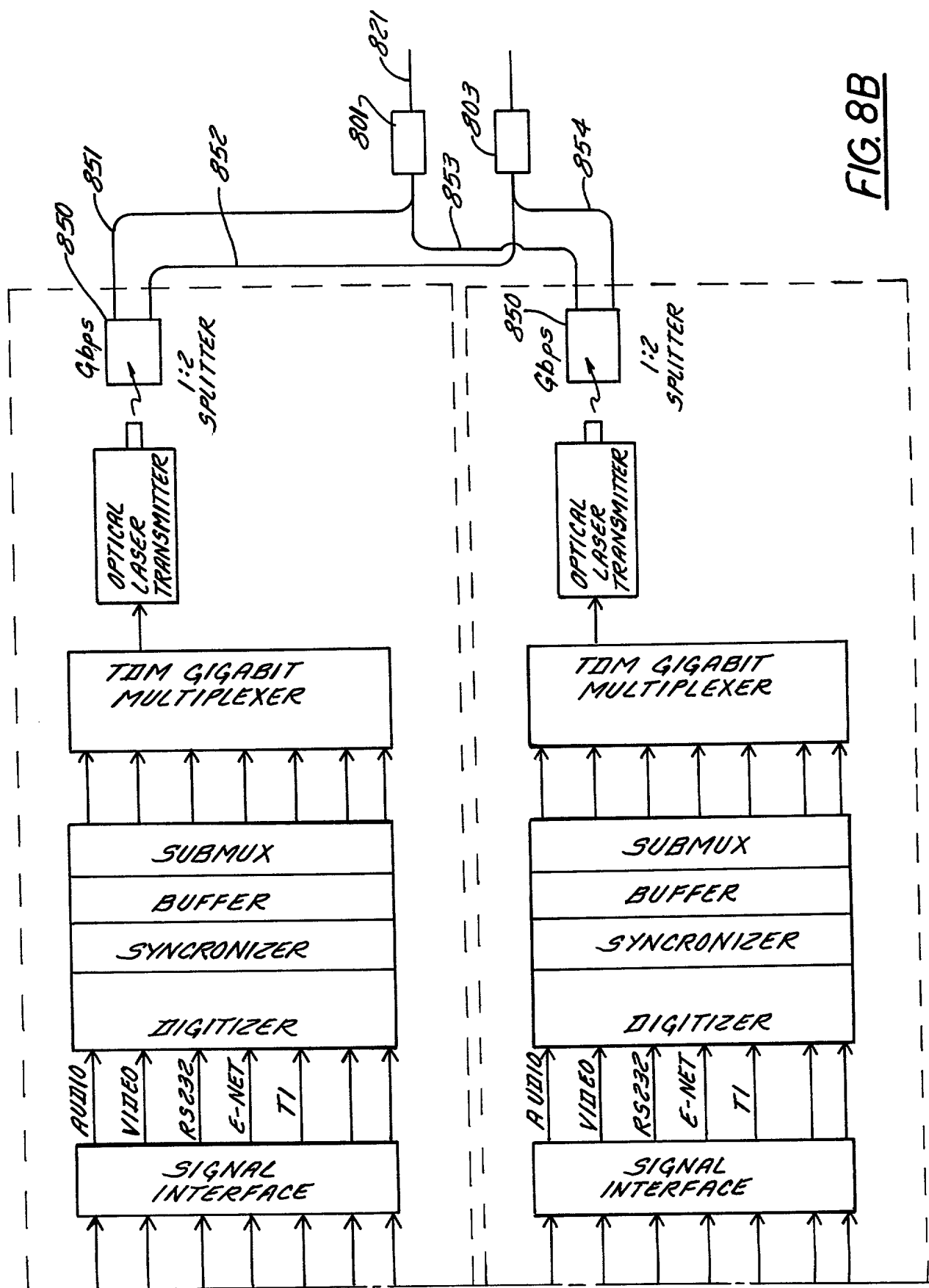


FIG. 8B

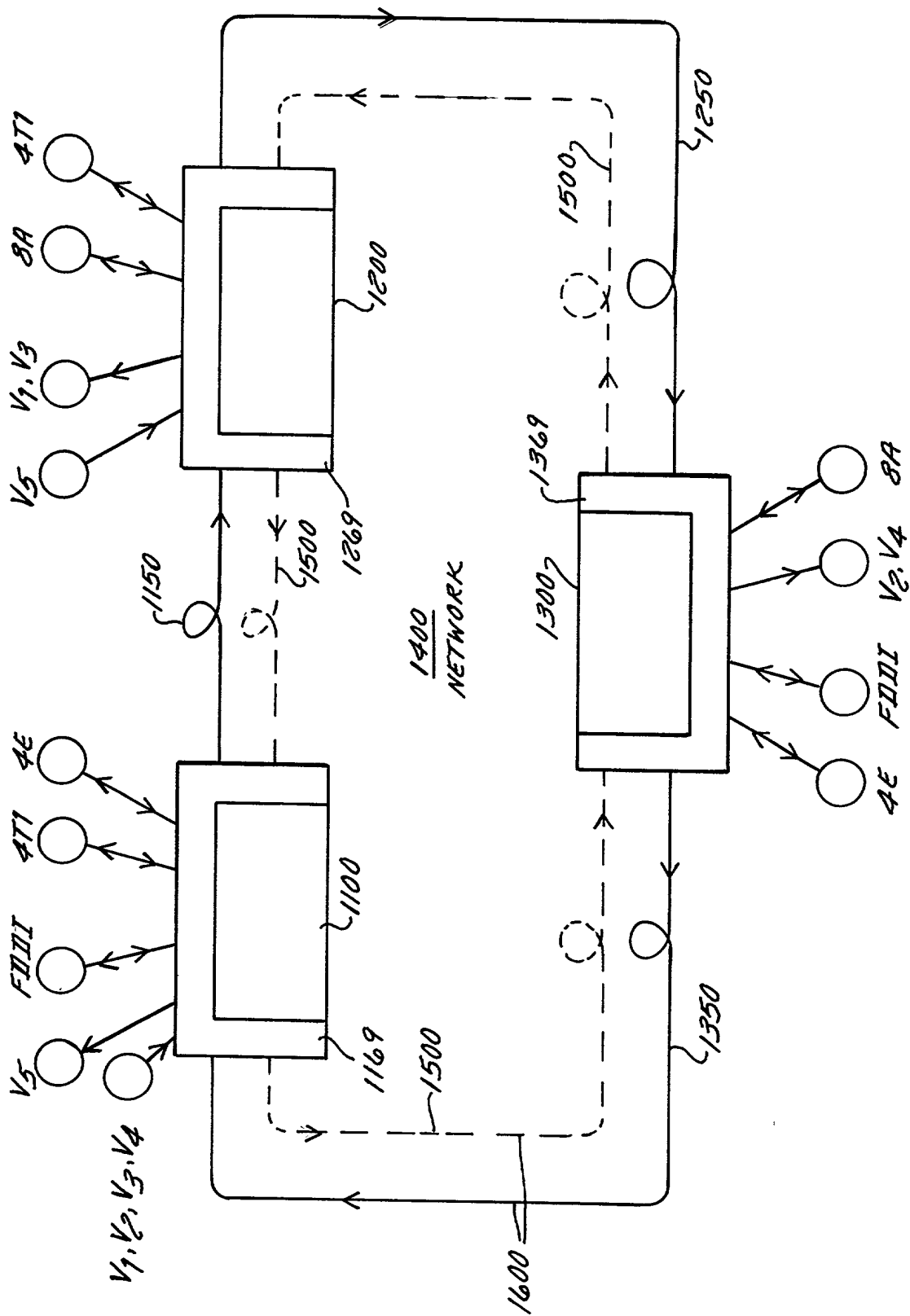
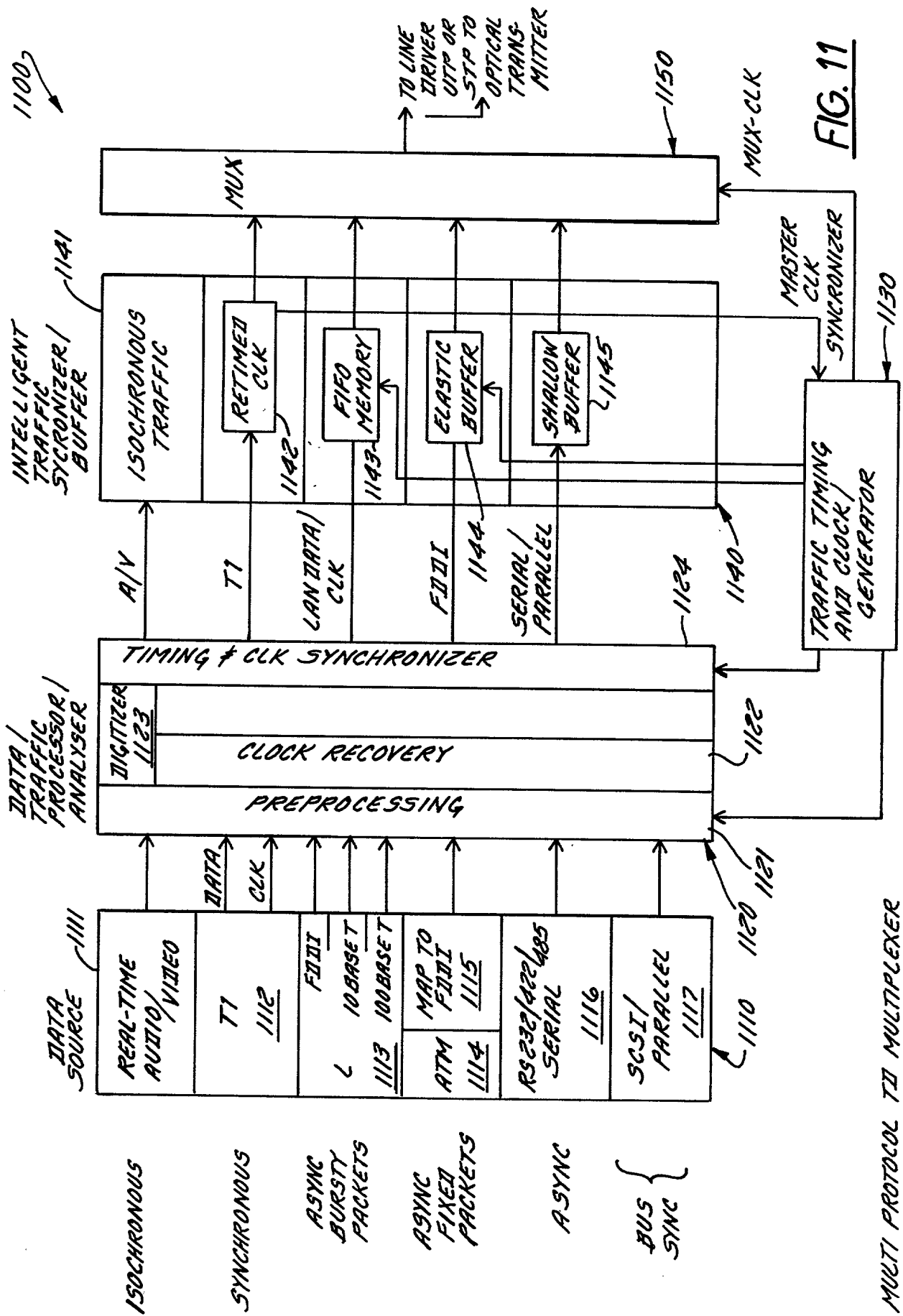
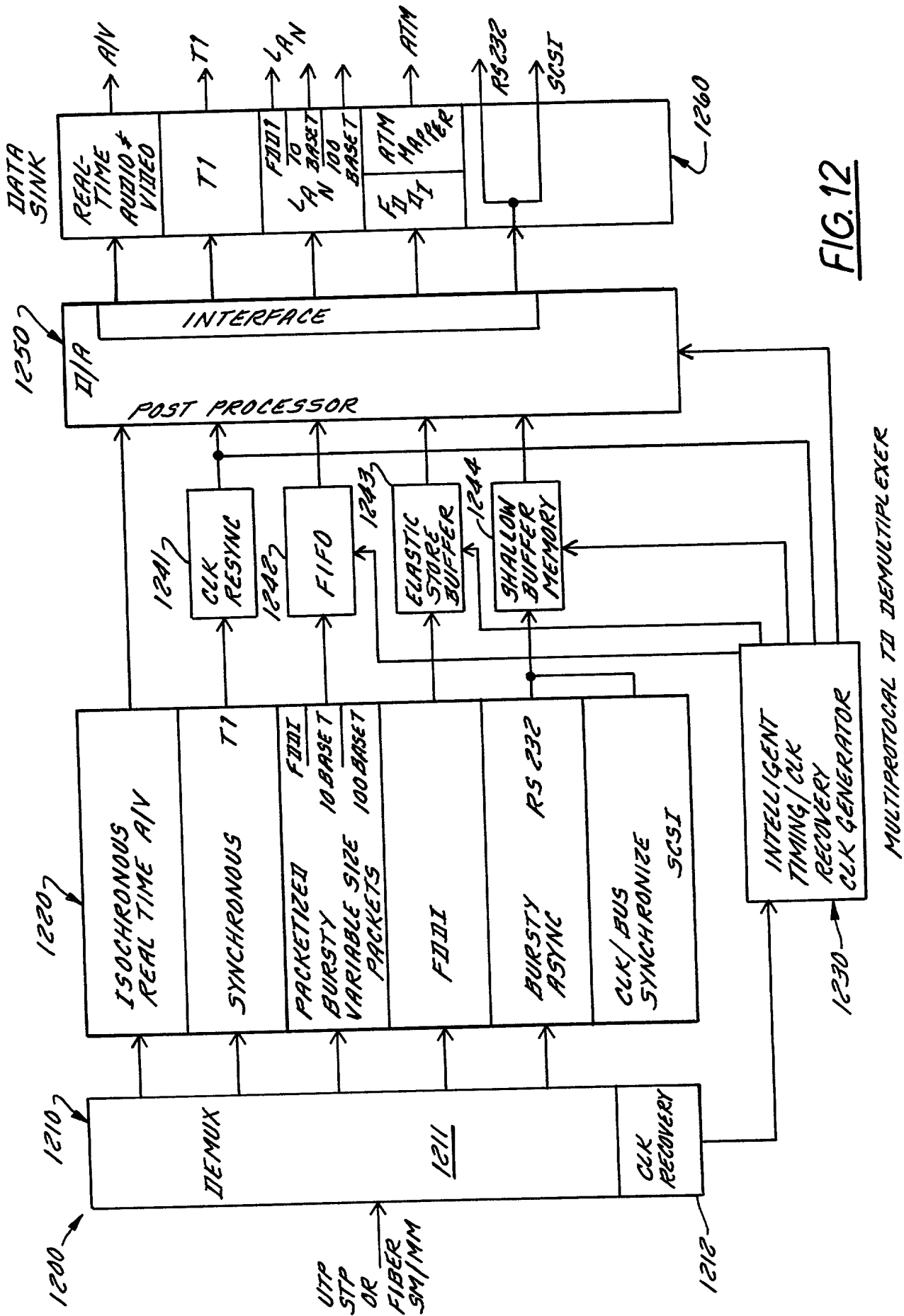


FIG. 10





DATA TYPE		MULTIPLEXER/DEMULTIPLEXER INTERFACE REQUIREMENT	DATA RATE	TIMING SENSITIVITY
AUDIO/ VIDEO MULTIMEDIA		<ul style="list-style-type: none"> <li>• CONTINUOUS SAMPLING</li> <li>• LOCK MATCHING</li> <li>• MINIMUM BUFFERING</li> </ul>	VARIABLE BIT RATE IN COMPRESSED MODE UNCOMPRESSED DEPENDS ON RESOLUTION & SAMPLING RATE	AUDIO/ VIDEO SYNCHRONIZATION
RS232/422/485 SERIAL ASYNCHRONOUS		CAN USE BUFFER OR LOW SPEEDS  USE OVERSAMPLING	VARIABLE 10kb/s → 10Mb/s	BAUD RATES NEED MATCHING -----
	SCSI PARALLEL		VARIABLE → 40 MBYTE/s	INTERLOCKED HANDSHAKE BUS TIMING SYNCHRONIZATION
	BUS SYNCHRONIZED	REQUIRE FIFO MEMORY		
T1		NEED DIRECT MATCHING OF T1 CLK WITH MUX SYNCHRONIZATION OF MASTER CLOCK	1.544 Mb/s	CLOCK/RECOVERY VERY STRICT TIMING REQUIRE CLK 1.544 ± 32 PPM
LAN  NET- WORK	FDDI	NEED CLOCK RECOVERY  MINIMUM BUFFER AND STRICT DATA RATE MATCHING USING SHALLOW FIFO	100 Mb/s	CLOCK RECOVERY REQUIRED ELASTIC BUFFER
	10 BASE T		10 Mb/s	CLOCK RECOVERY NEEDED
	100 BASE T		100 Mb/s	CLOCK RECOVERY NEEDED
WIDE AREA  ST1/ST3  ATM		PRECISE NEED CLOCK RECOVERY AND DEFRAMING WITH TRANSFER TO PACKET	51.84/155.5 OC1/OC3 Mb/s	TIME/STAMP REQUIREMENT  CLOCK CORRECTION

FIG. 13A

<i>DELAY/LATENCY SENSITIVITY</i>	<i>TRAFFIC TYPE</i>	<i>DATA STREAM</i>	<i>APPLICATIONS</i>	<i>REMARKS TYPE OF CHANNEL</i>
<i>CONSTANT FOR MINIMUM JITTER</i>	<i>CONSTANT BIT RATE LAMINAR BIT STREAM</i>		<i>MULTIMEDIA TELECONFERENCING VIDEO CONFERENCING SECURITY</i>	<i>ISOCHRON- OUS</i>
<i>JITTER REQUIREMENT (NOT VERY TIGHT)</i>	<i>VARIABLE BIT RATE</i>		<i>COMPUTER TO COMPUTER / PERIPHERAL  COMPUTER TO MEMORY</i>	<i>ASYNCHRO- NOUS  BUS SYNCHRO- NOUS</i>
<i>MINIMUM JITTER REQUIREMENT FOR VOICE MIN. ACCEPTABLE LATENCY ~ 150 ms</i>	<i>CONSTANT BIT RATE</i>		<i>TELEPHONY WIDE AREA</i>	<i>SYNCHRON- OUS</i>
<i>MAX. ELASTICITY FUNCTION OF NET- WORK/TOKEN ROTATING TIMES</i>	<i>BURSTY ASYNCHRONOUS PACKETIZED</i>		<i>OPTICAL NET- WORK IN BACKBONES</i>	<i>BURSTY PACKETIZED</i>
<i>COLLISION DOMAIN LIMITED</i>	<i>ASYNCHRONOUS</i>		<i>LAN</i>	<i>ASYNCHRON- OUS</i>
<i>COLLISION DOMAIN LIMITED</i>	<i>ASYNCHRONOUS</i>		<i>LAN</i>	<i>ASYNCHRON- OUS</i>
<i>VARIABLE LATENCY DEPENDING ON TRAFFIC MIN. LATENCY AND JITTER REQUIREMENT FOR VOICE/TELE- PHONE AND MULTI- MEDIA TRAFFIC</i>	<i>VBR: VARIABLE BIT RATE CBR: CONSTANT BIT RATE ABR: AVAILABLE BIT RATE ASYNCHRONOUS TRANSFER MODE ASYNCHRONOUS</i>		<i>WIDE AREA NETWORK</i>	<i>CAN MAP ATM CELLS TO FDDI PACKETS AND THE TRANSFER SYNCHRON- OUSLY</i>

FIG. 13B



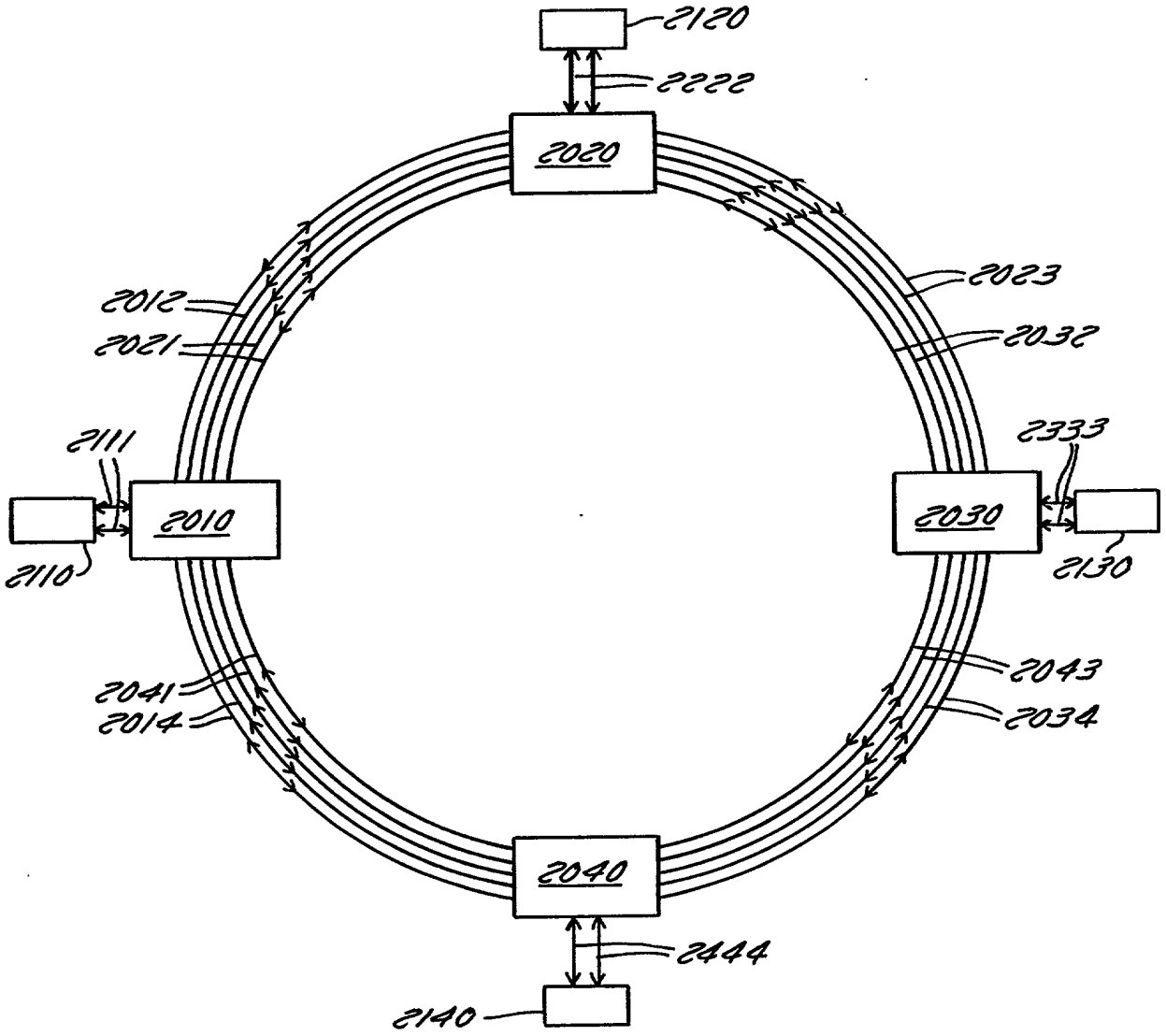


FIG. 14

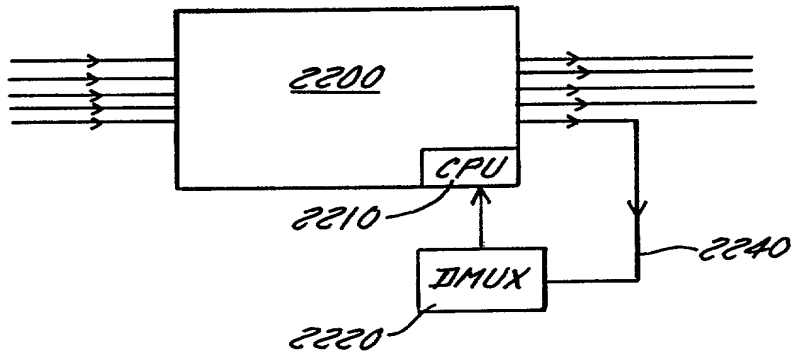


FIG. 15

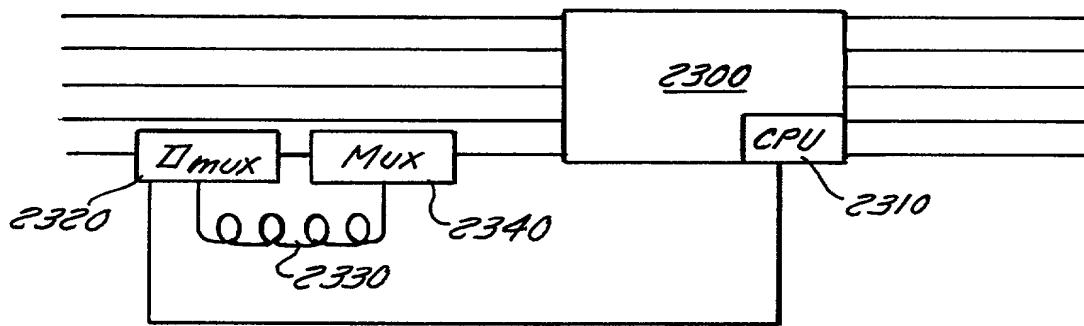


FIG. 16

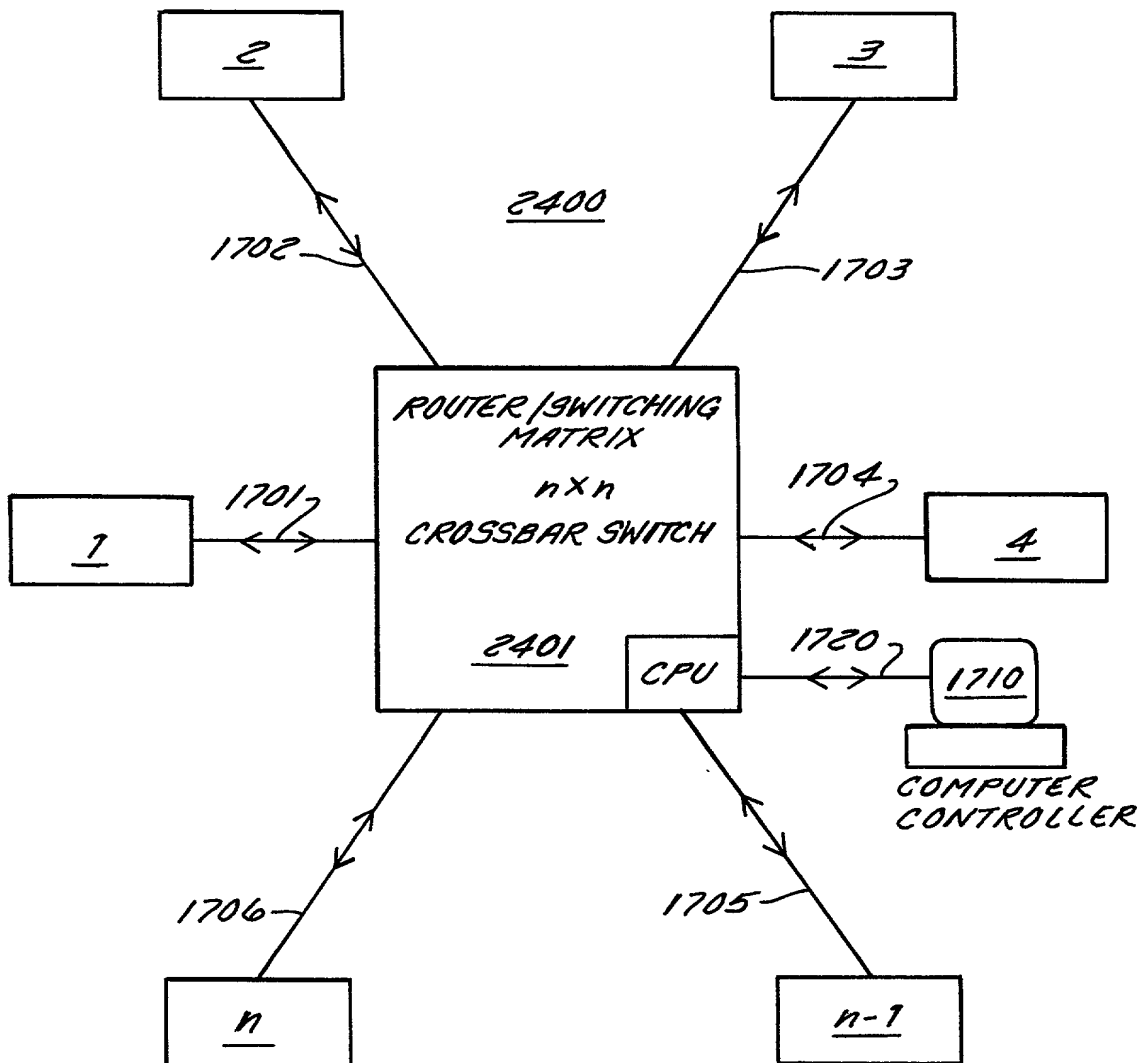


FIG. 17

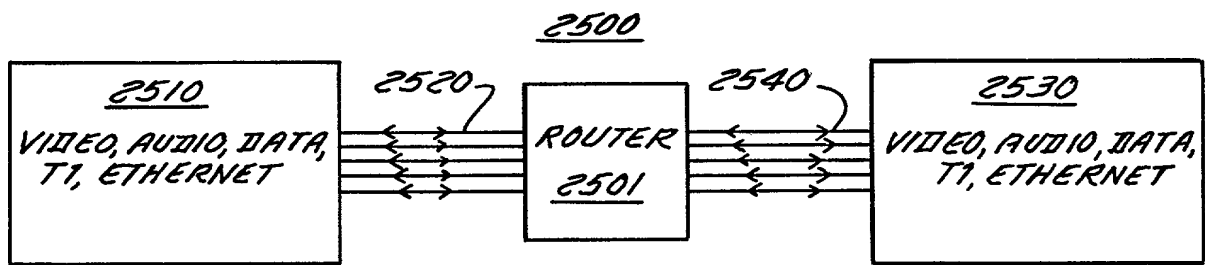


FIG. 18

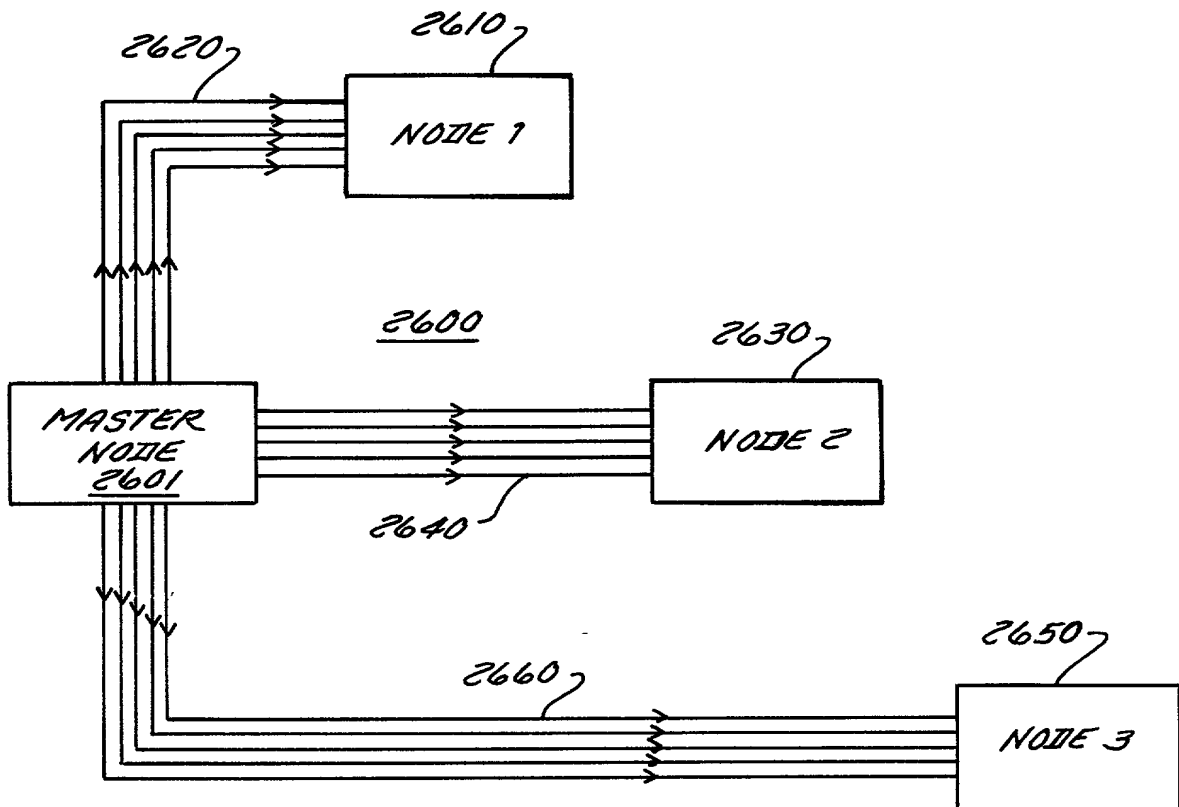


FIG. 19

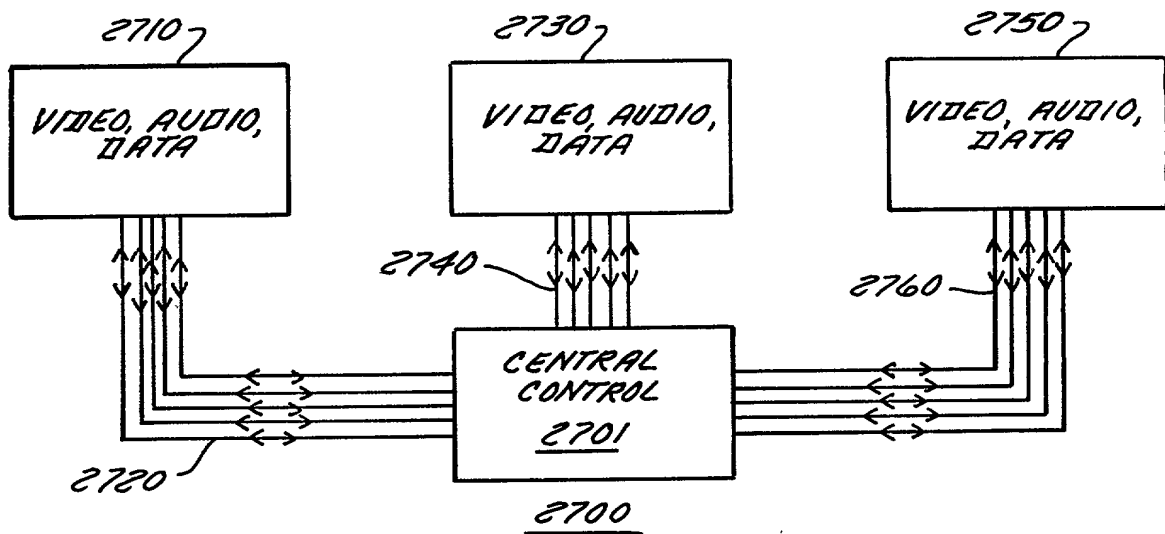


FIG. 20

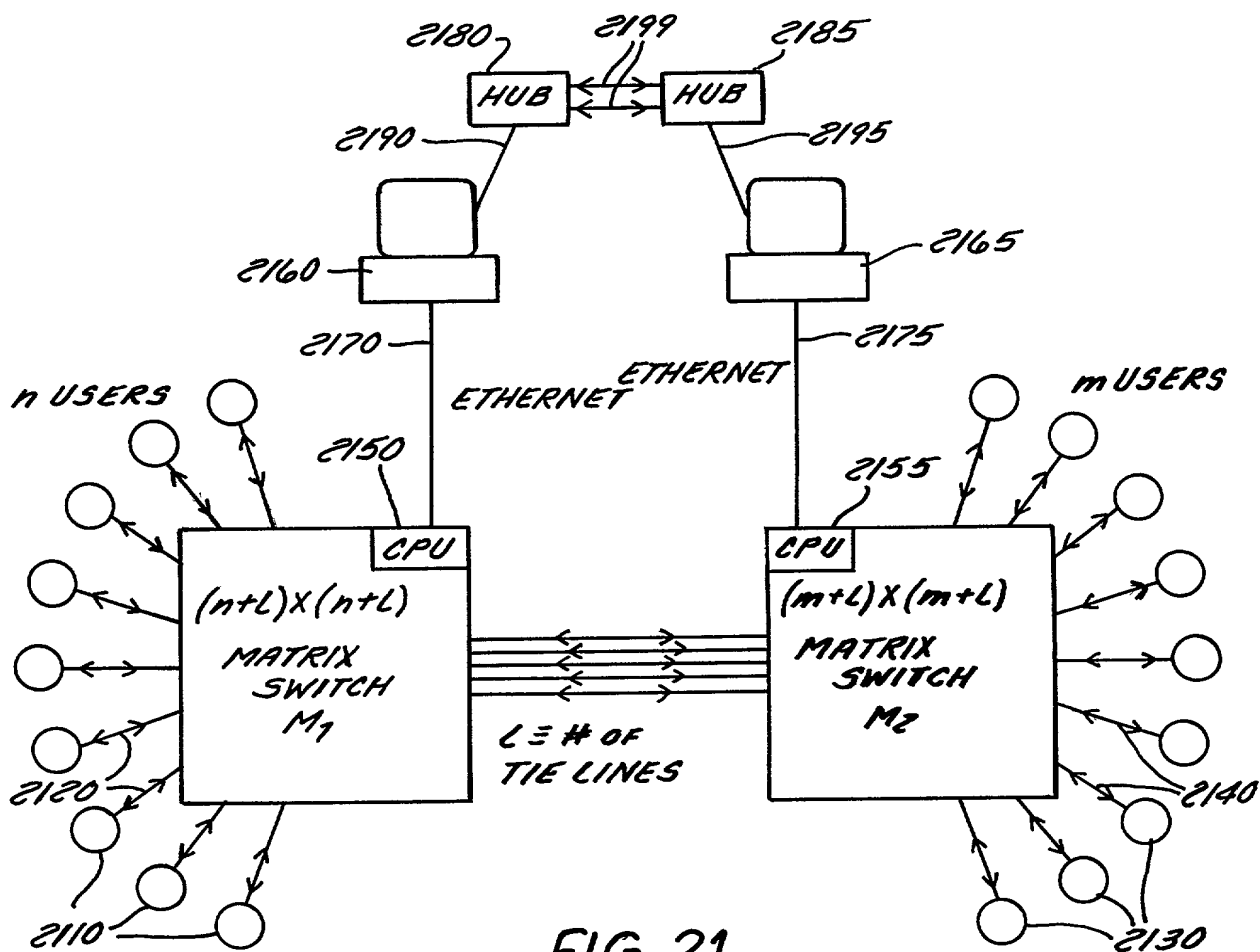


FIG. 21

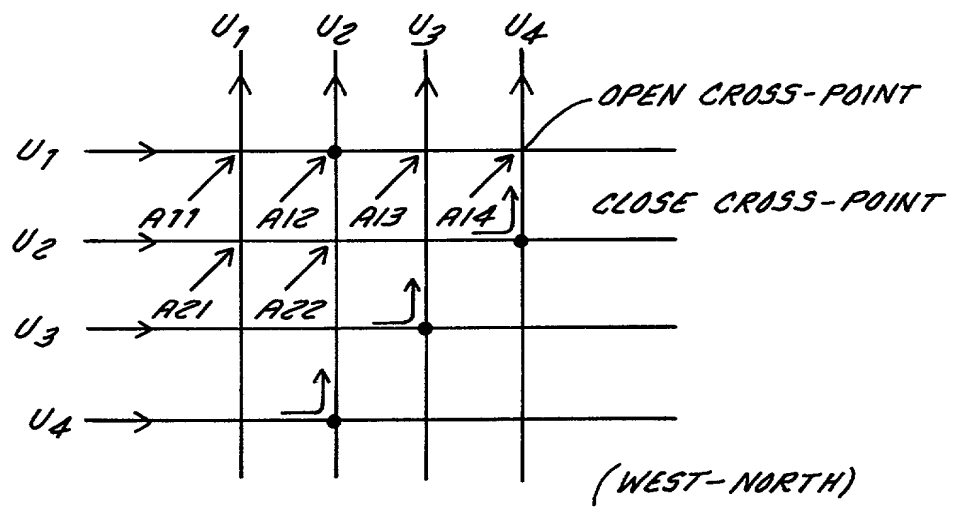


FIG. 22

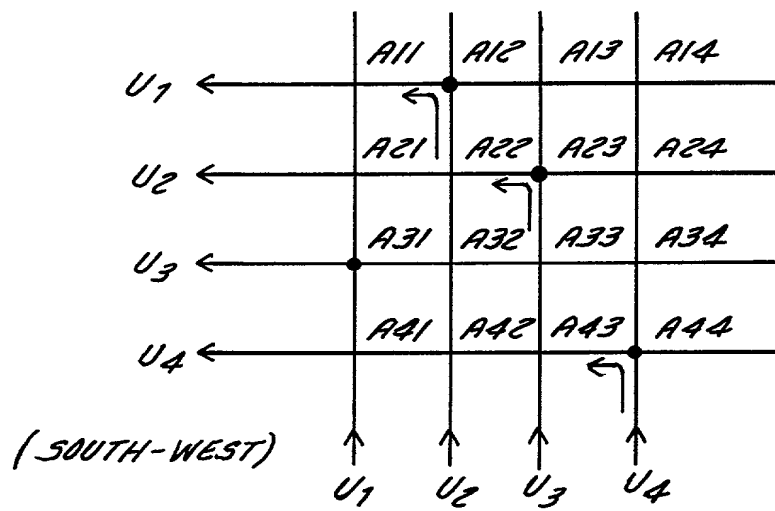


FIG. 23

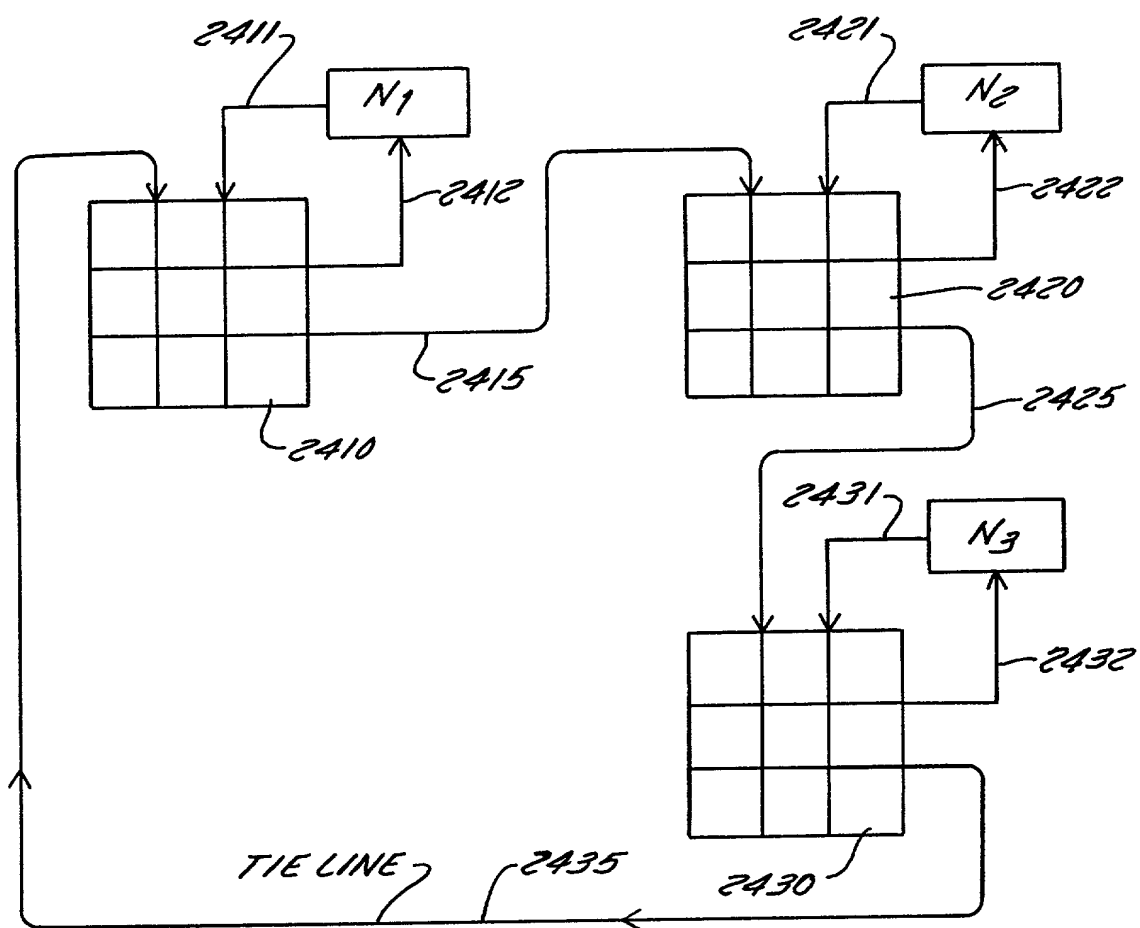


FIG. 24

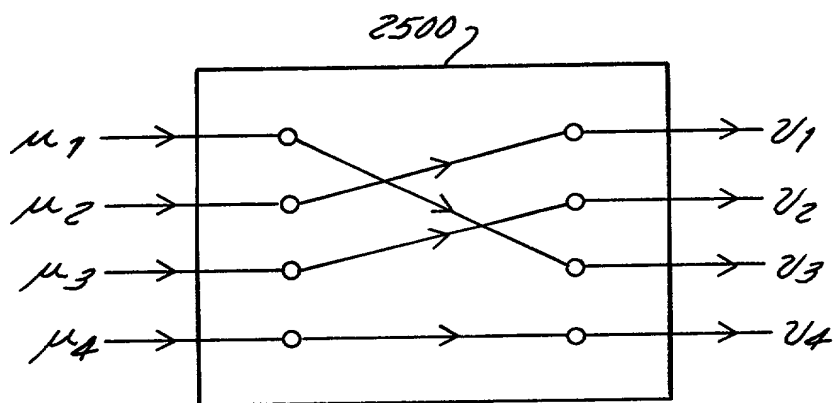


FIG. 25

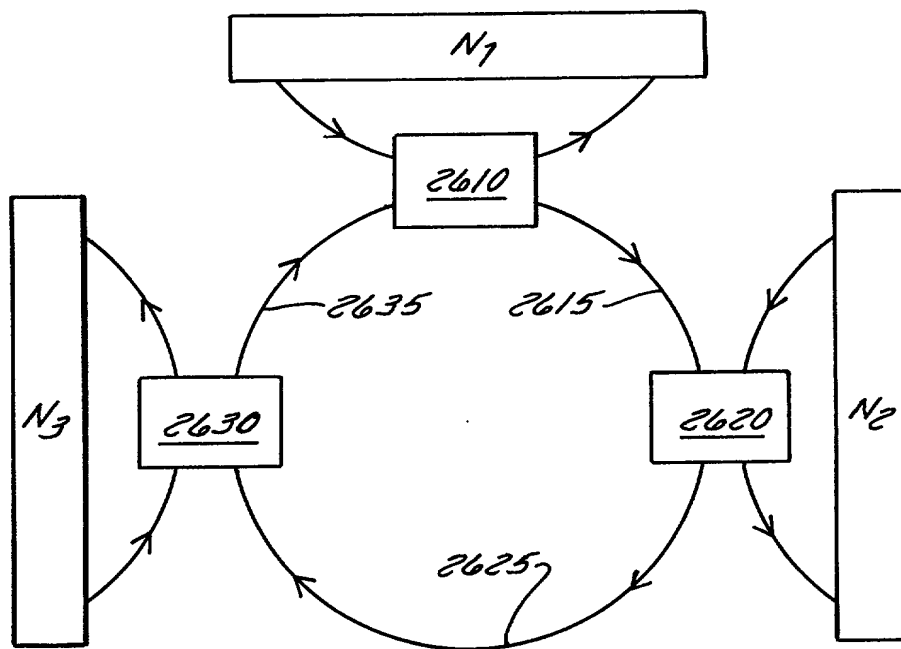


FIG. 26

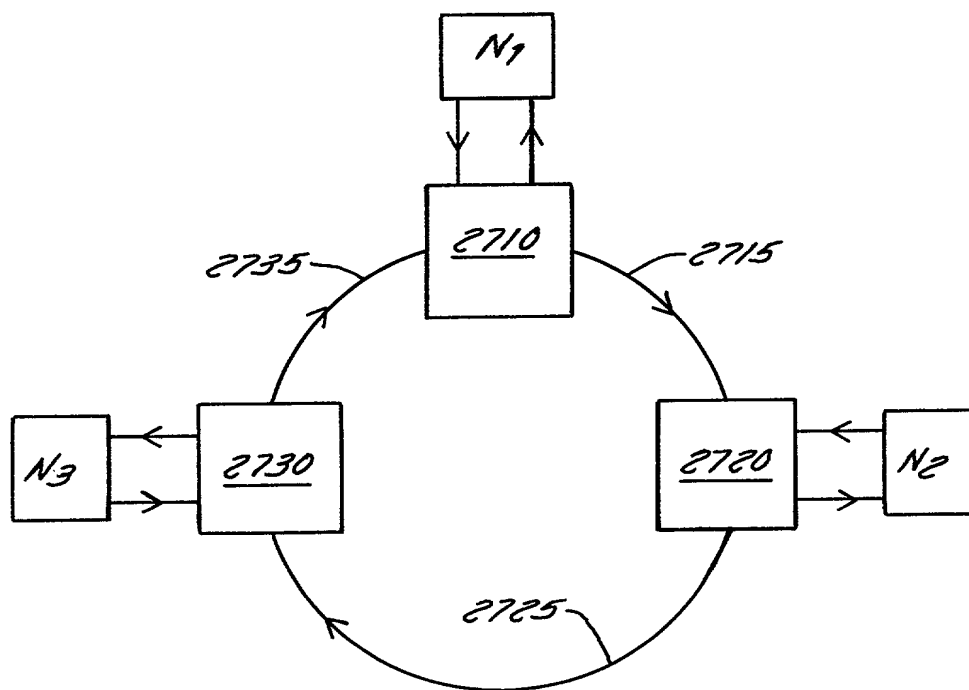


FIG. 27

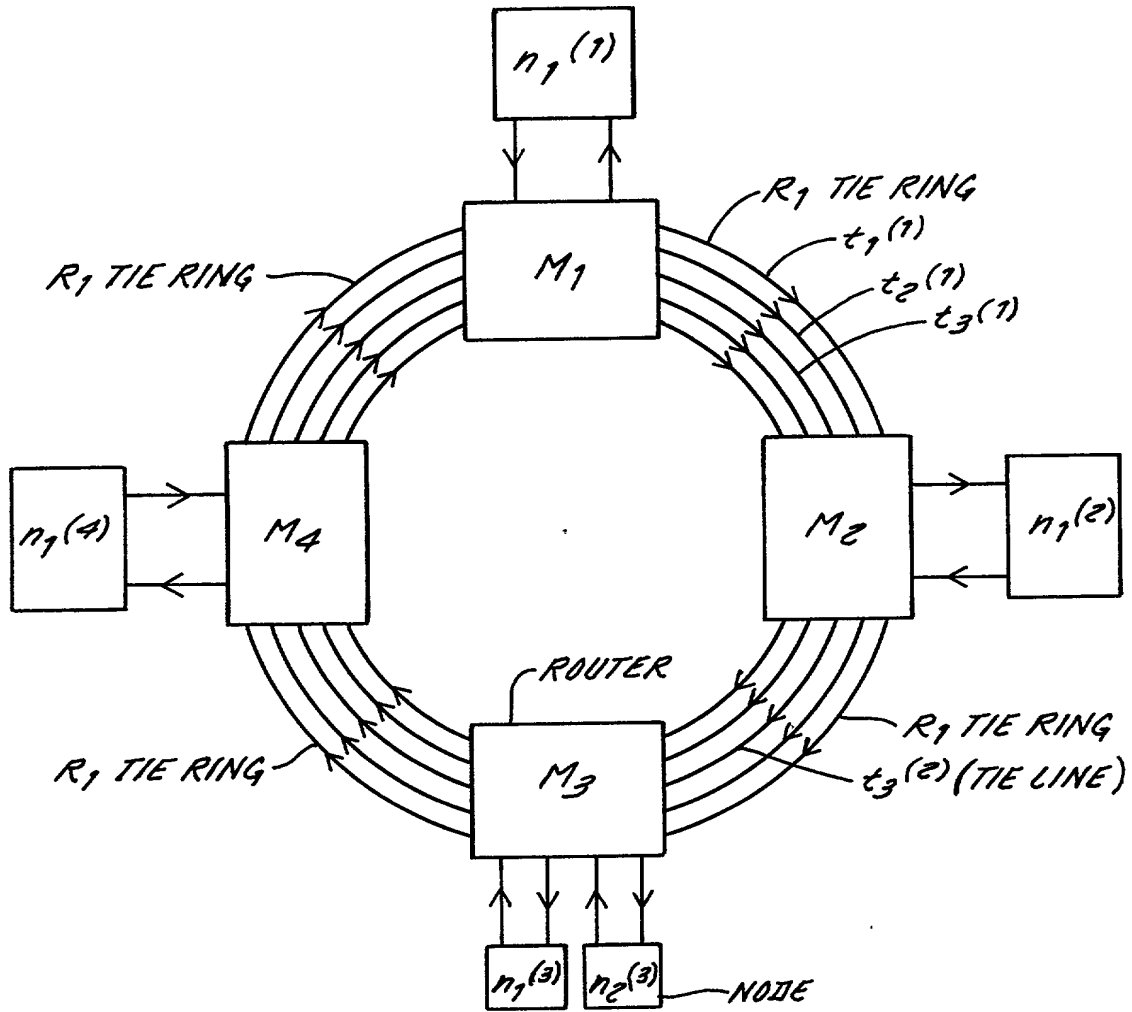
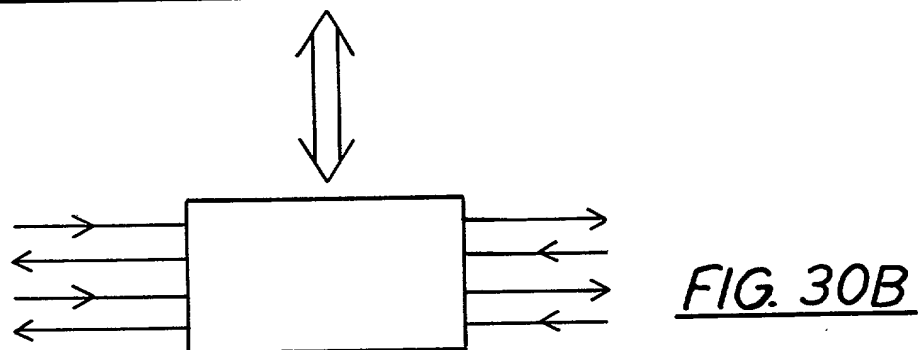
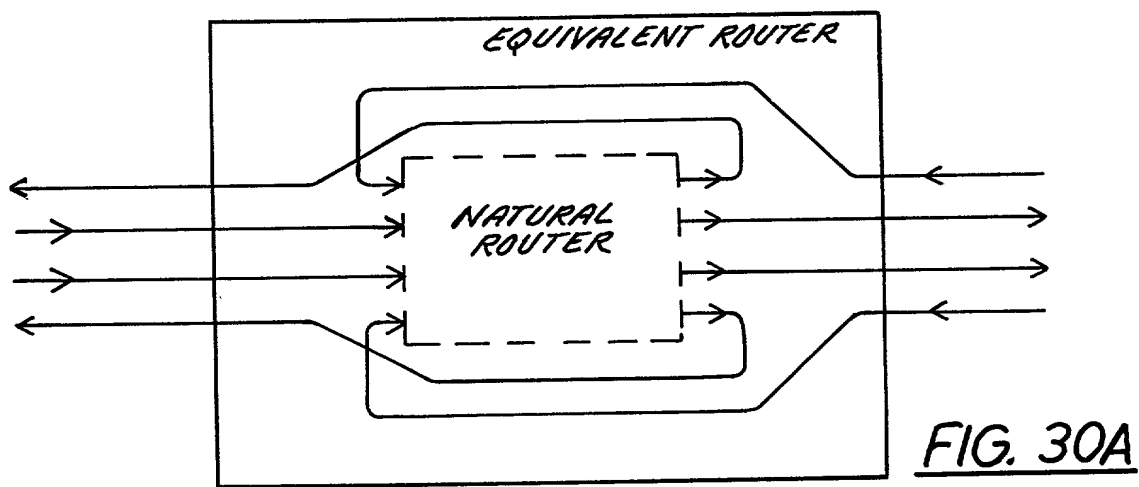
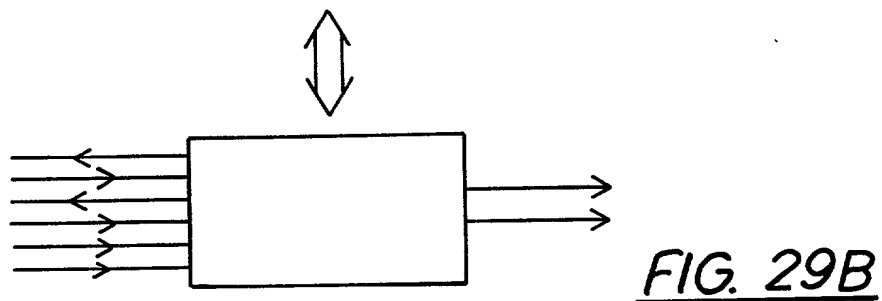
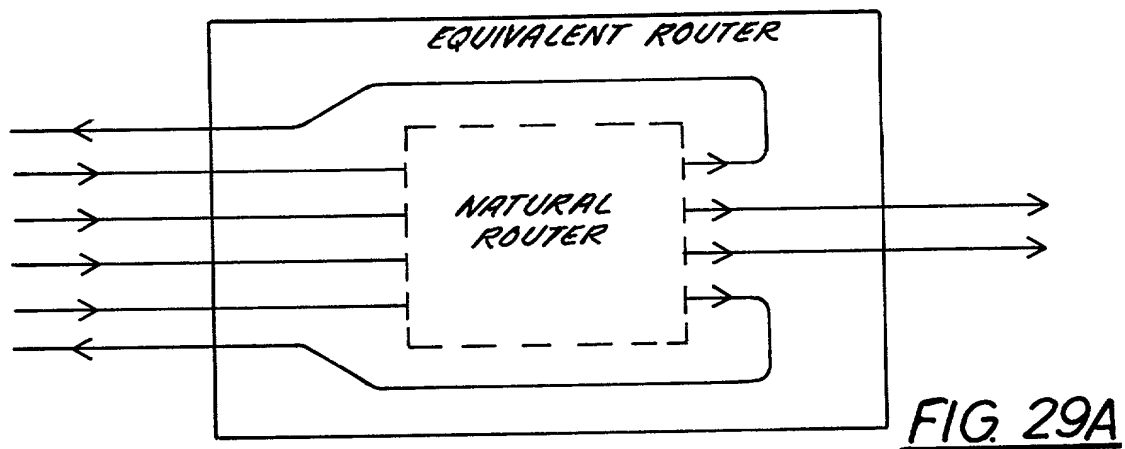


FIG. 28





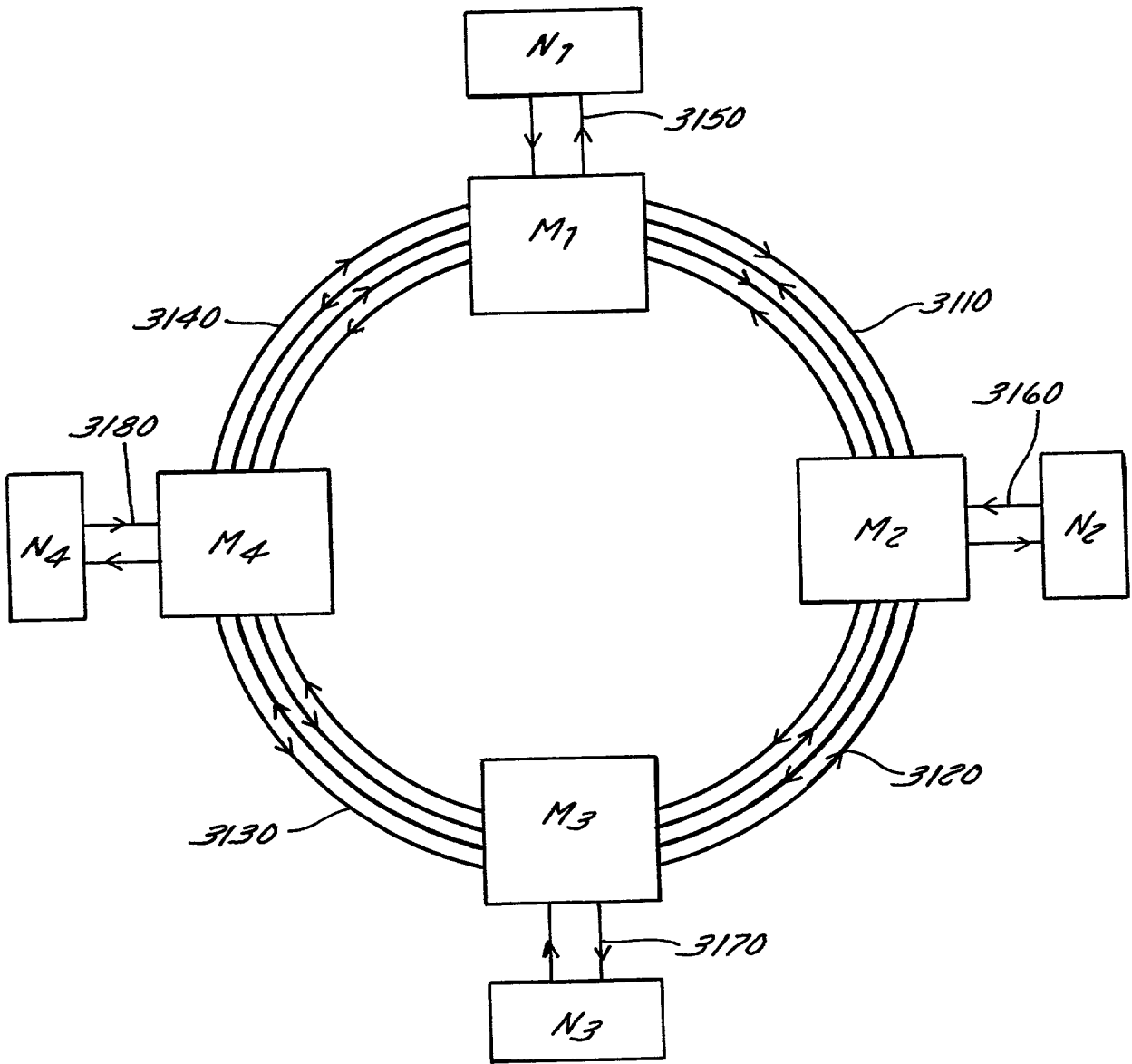


FIG. 31

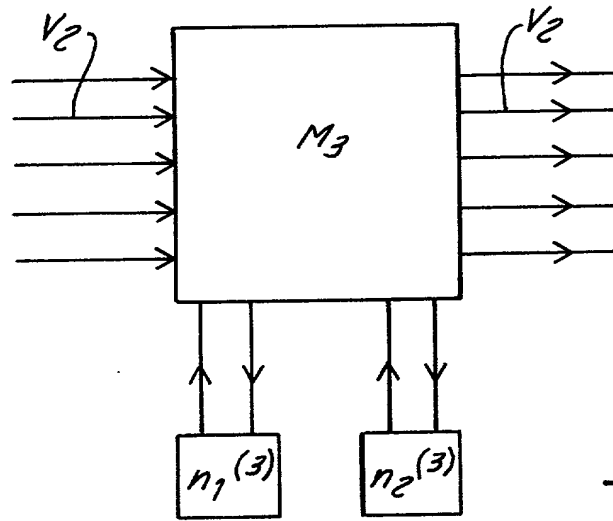


FIG. 32A

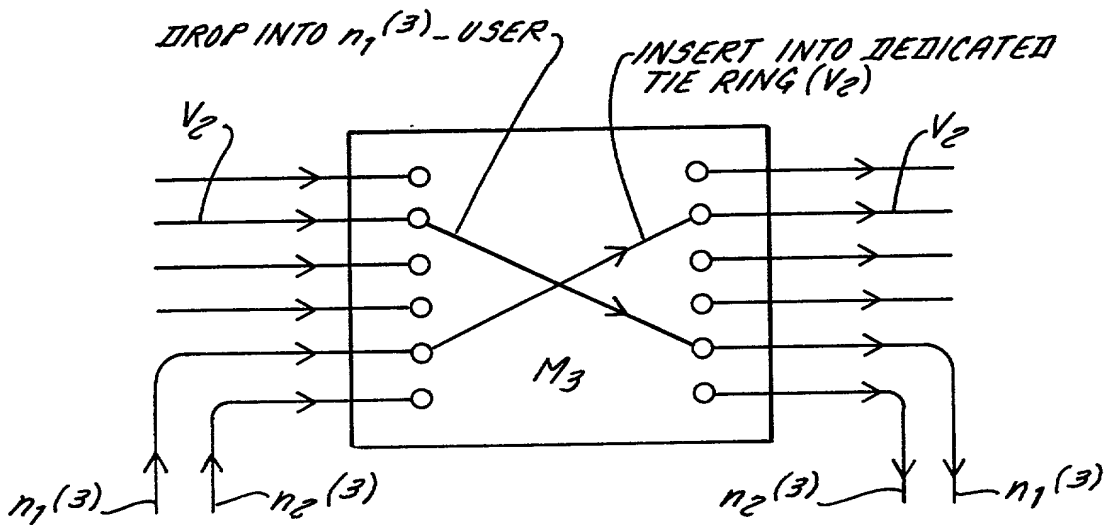


FIG. 32B

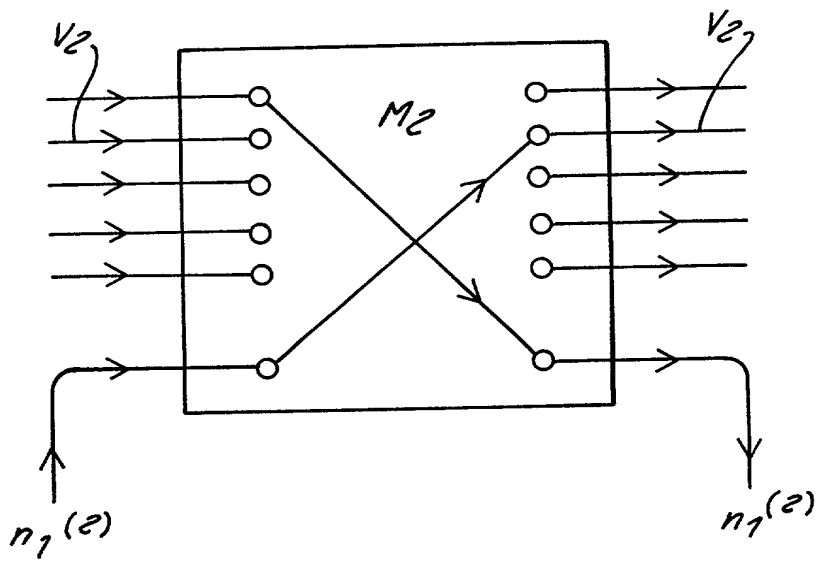


FIG. 32C

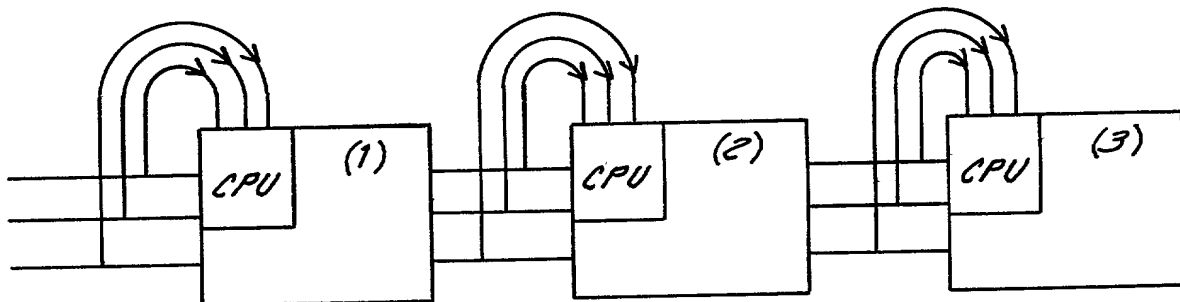


FIG. 32D

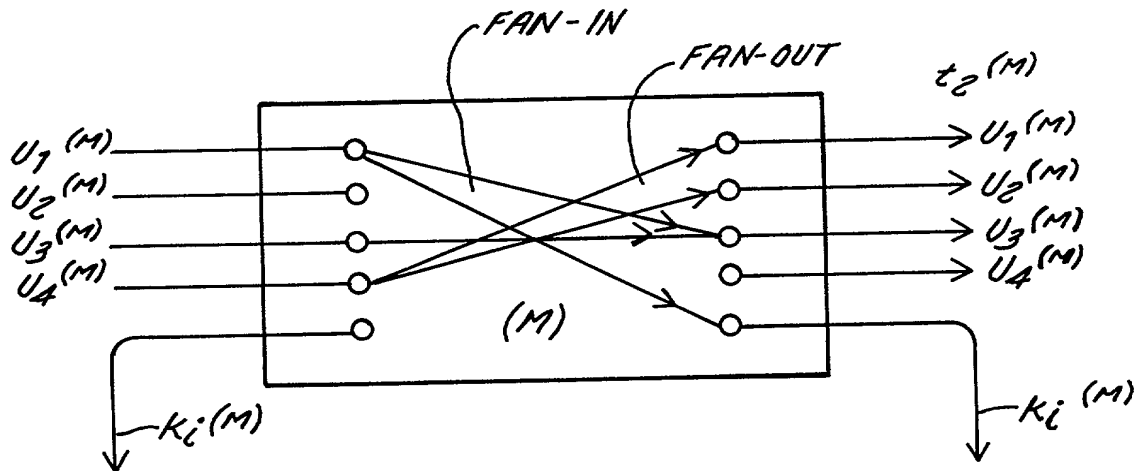


FIG. 33

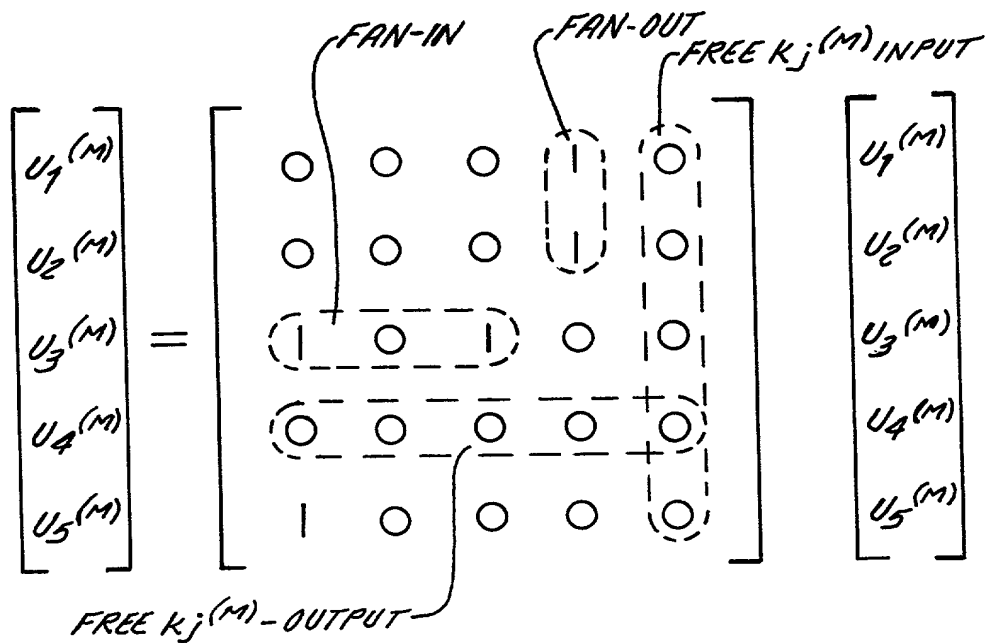


FIG. 34

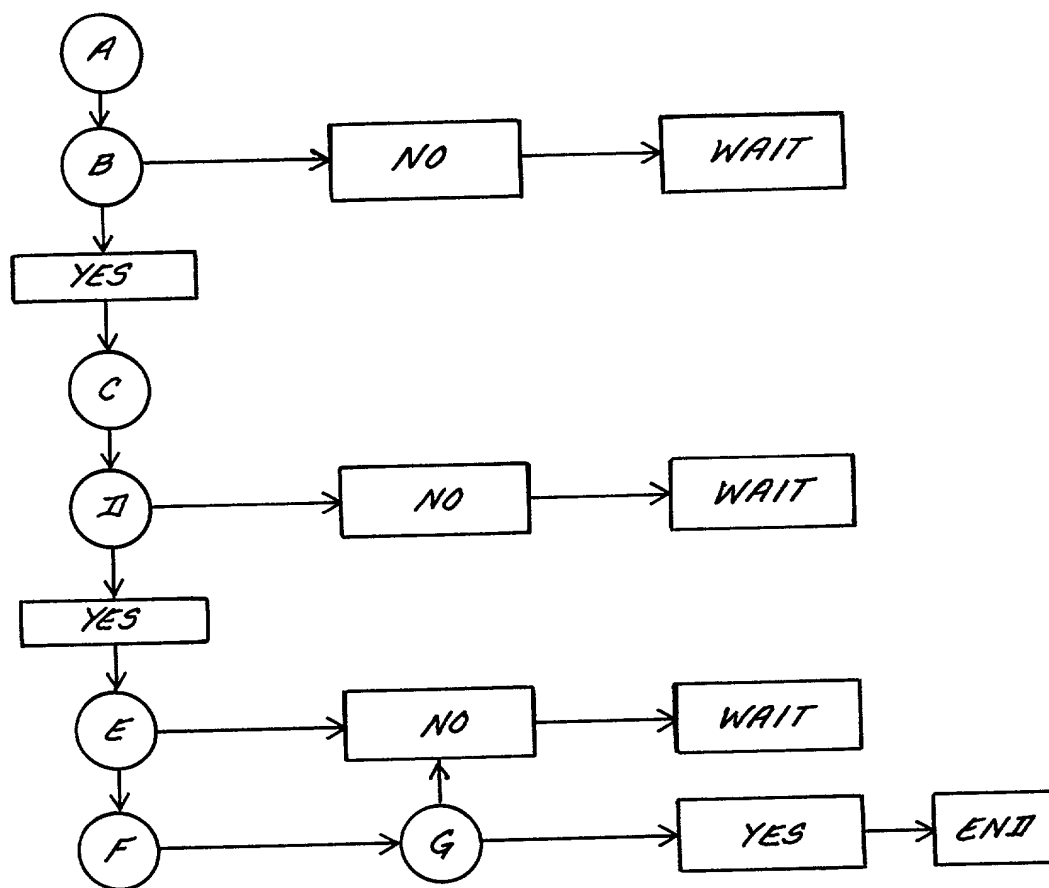


FIG. 35

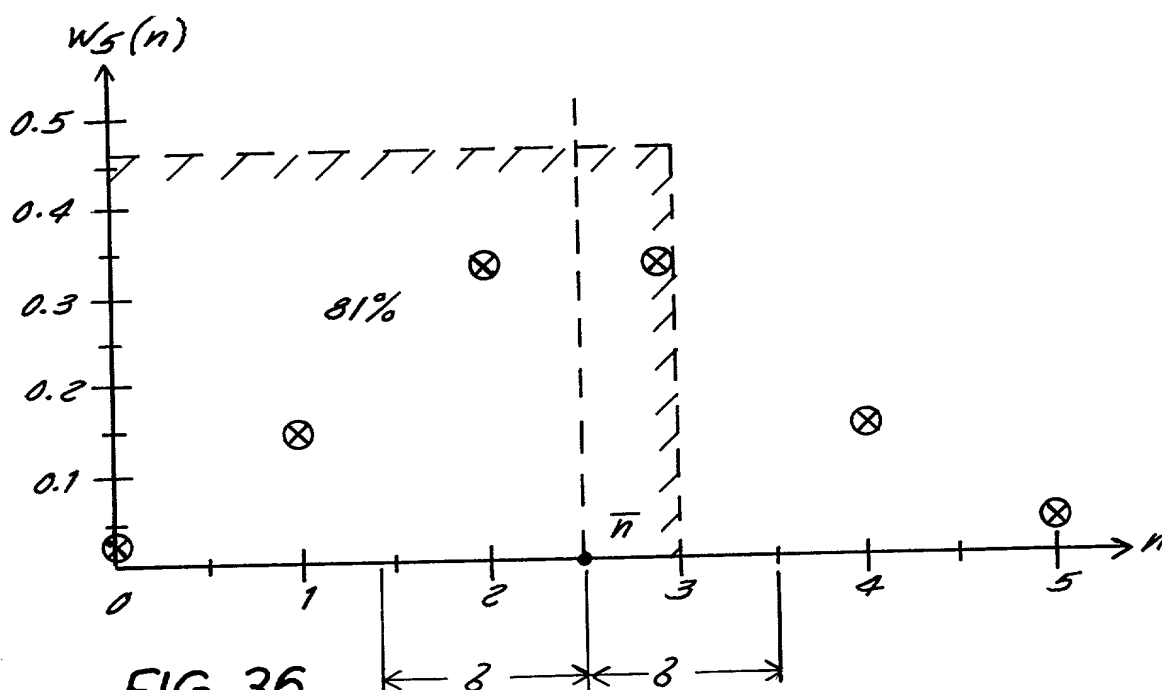


FIG. 36

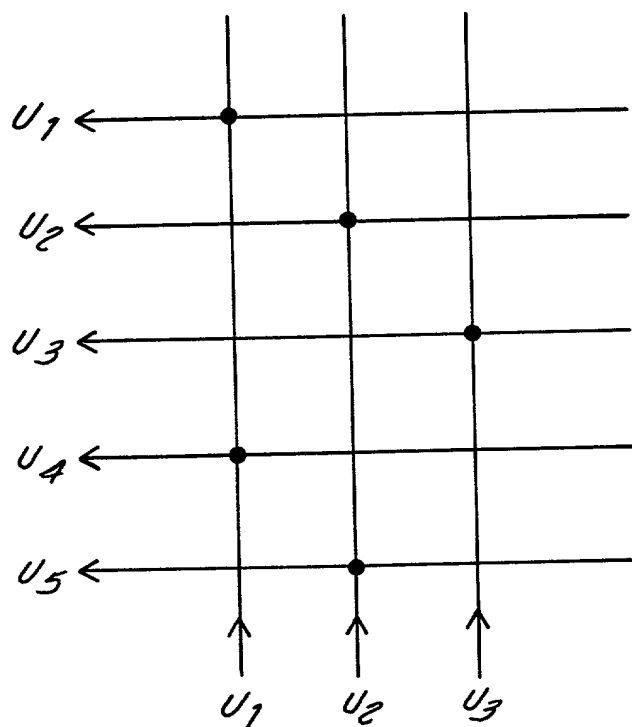


FIG. 37

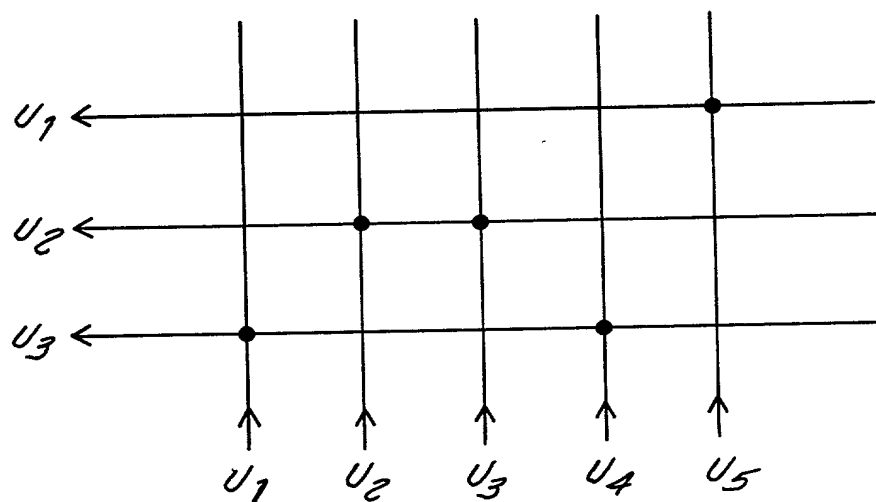


FIG. 38

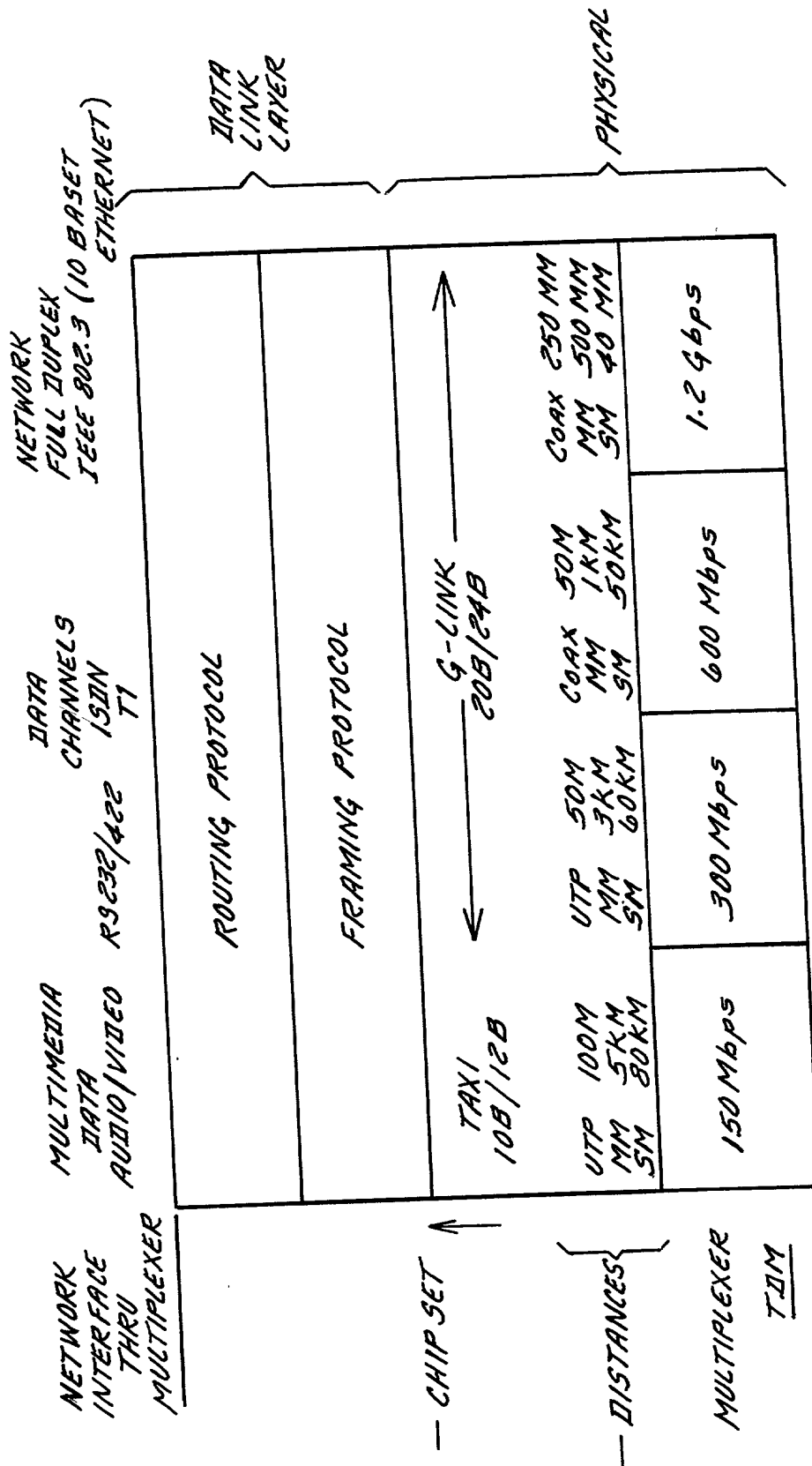


FIG. 39



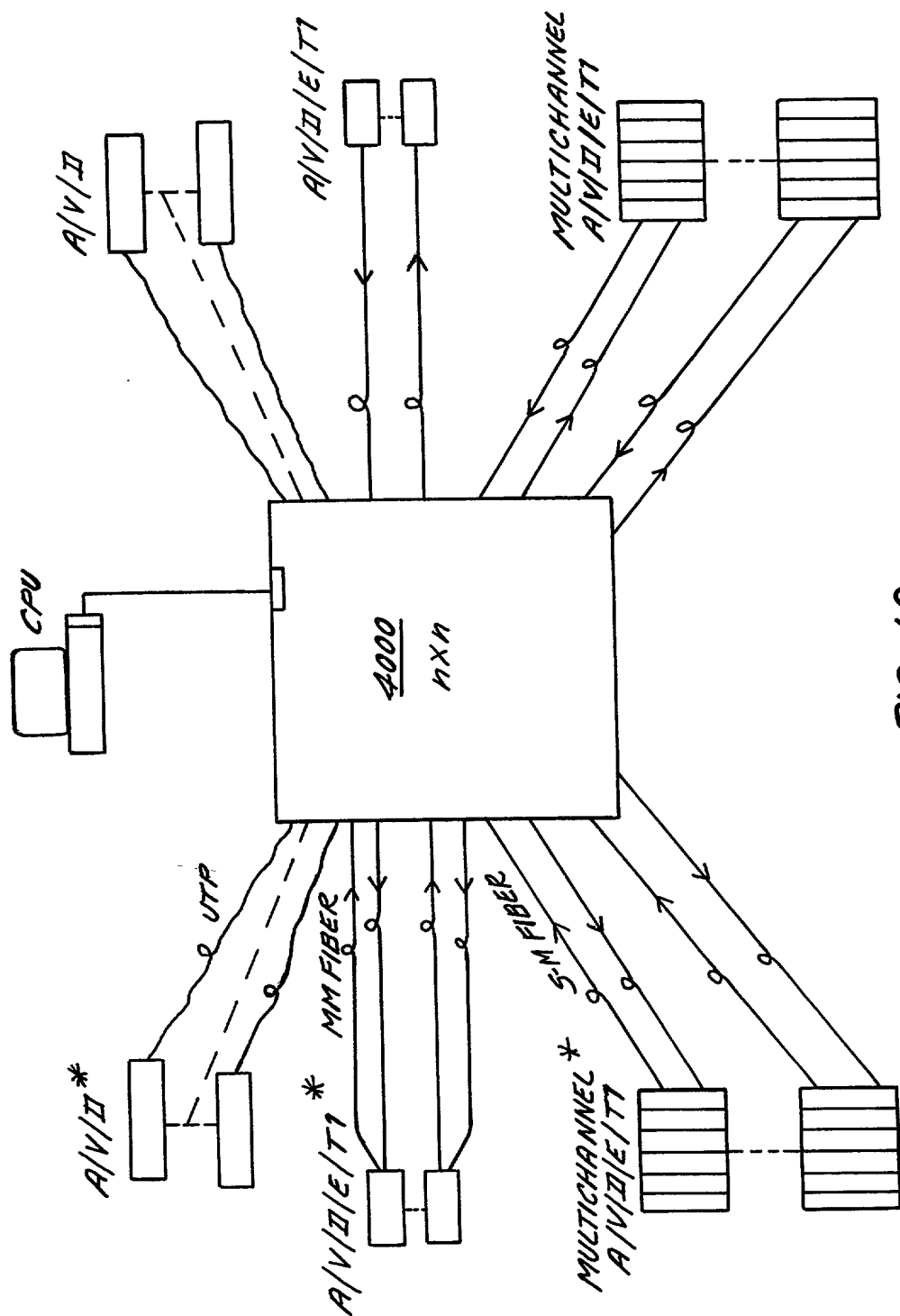


FIG. 40

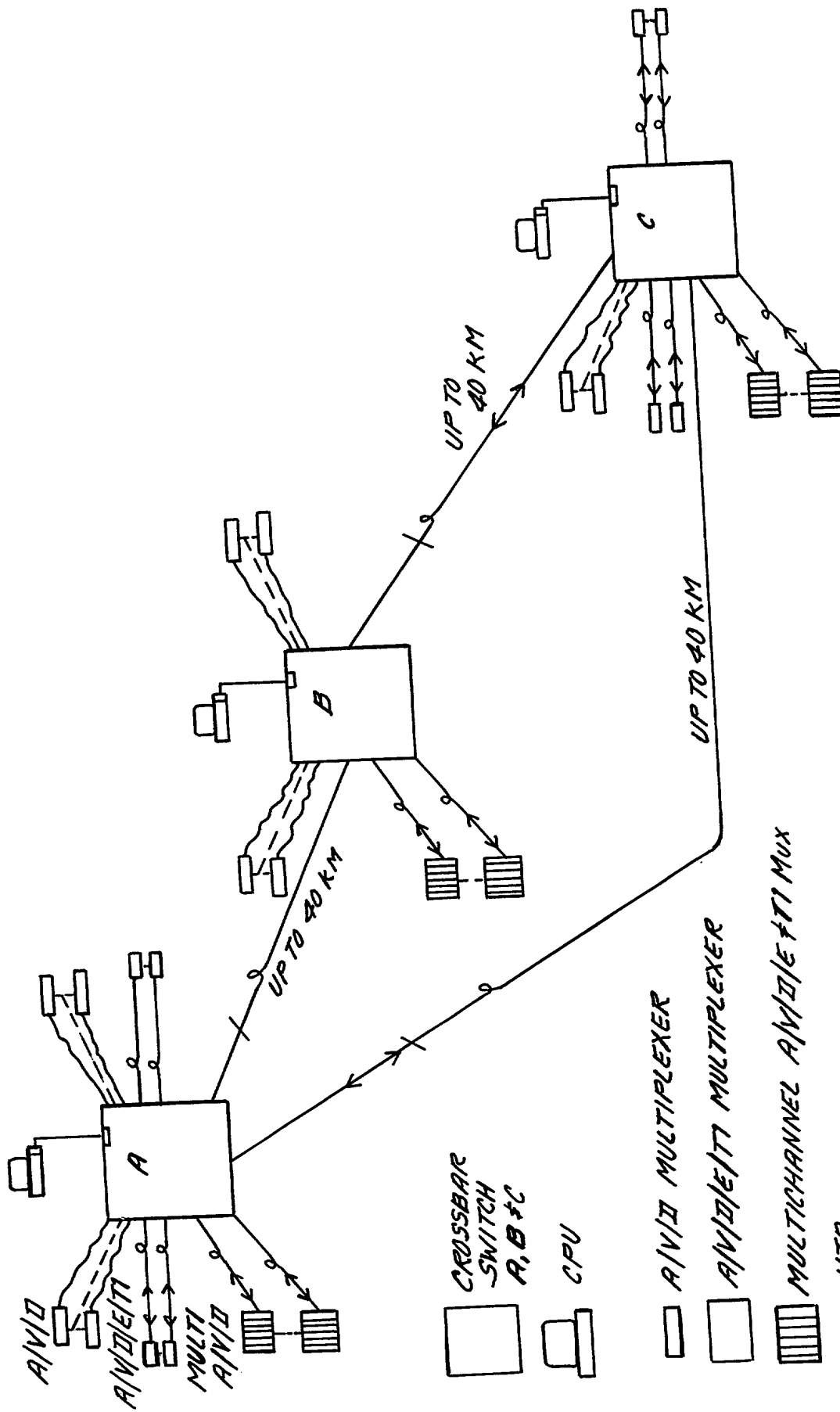


FIG. 41

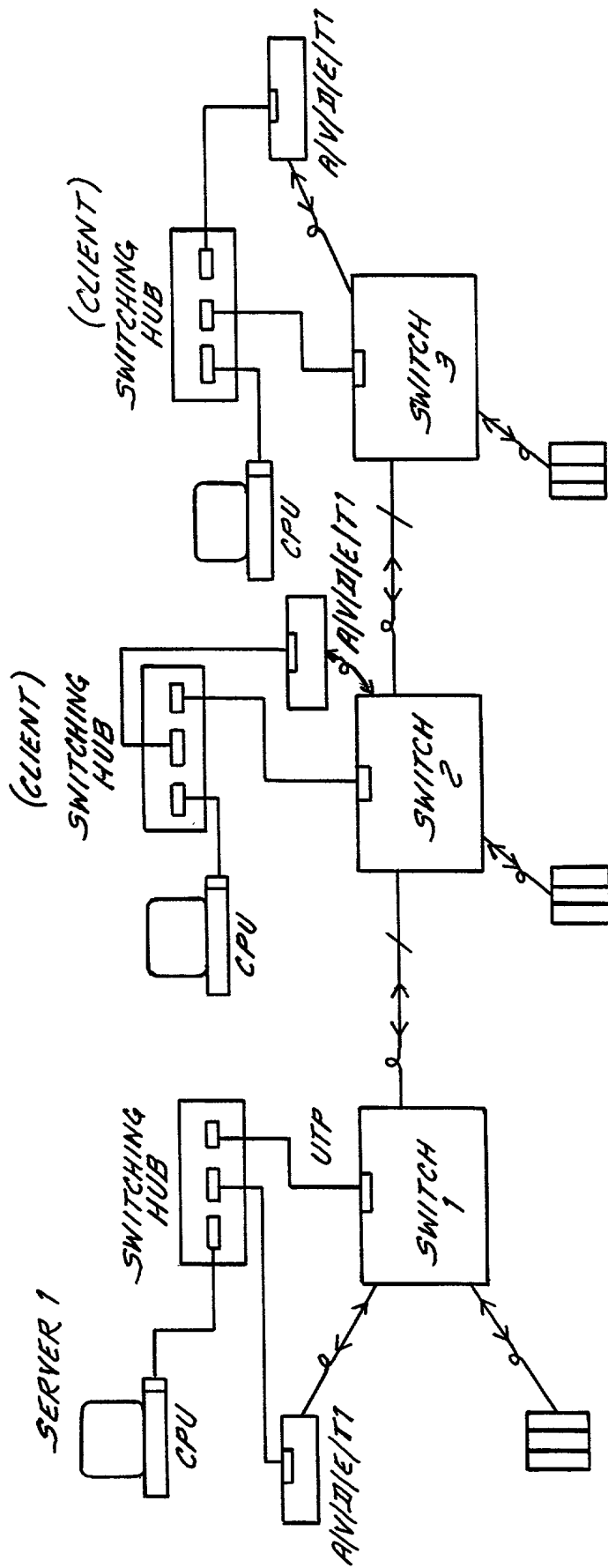


FIG. 42

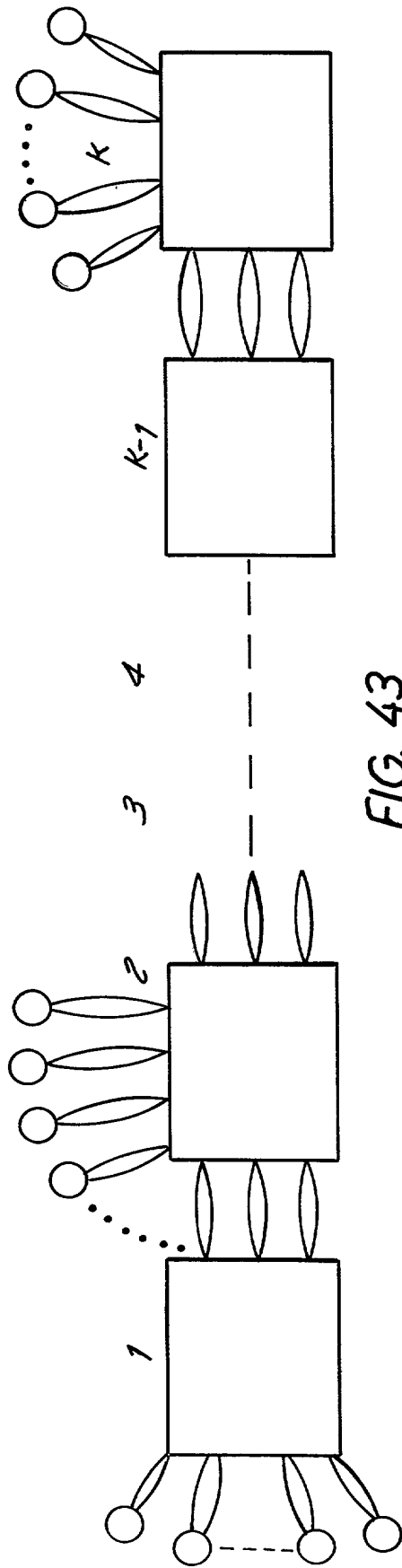


FIG. 43

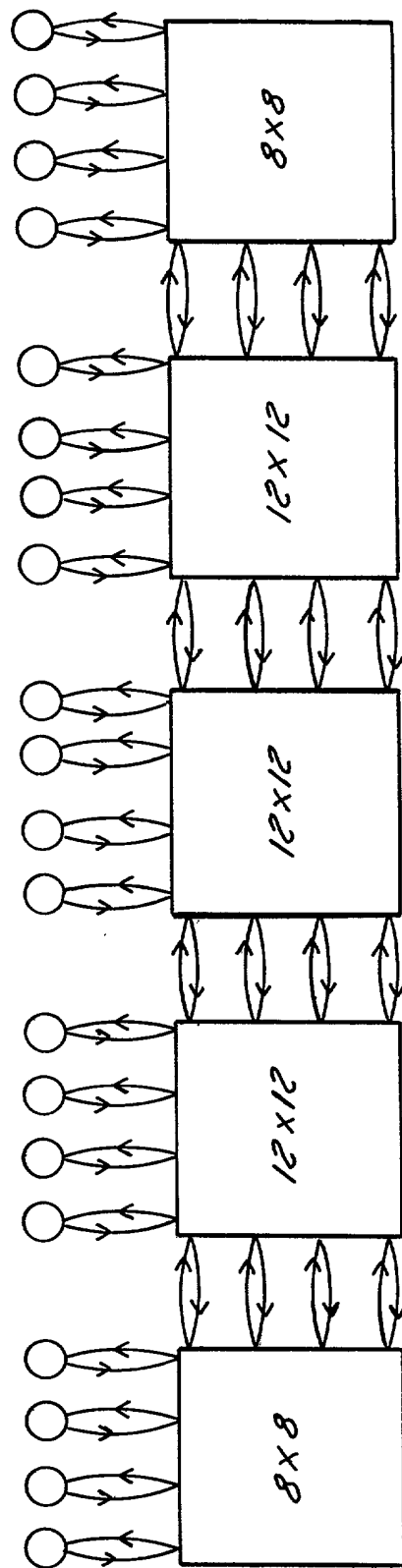


FIG. 44

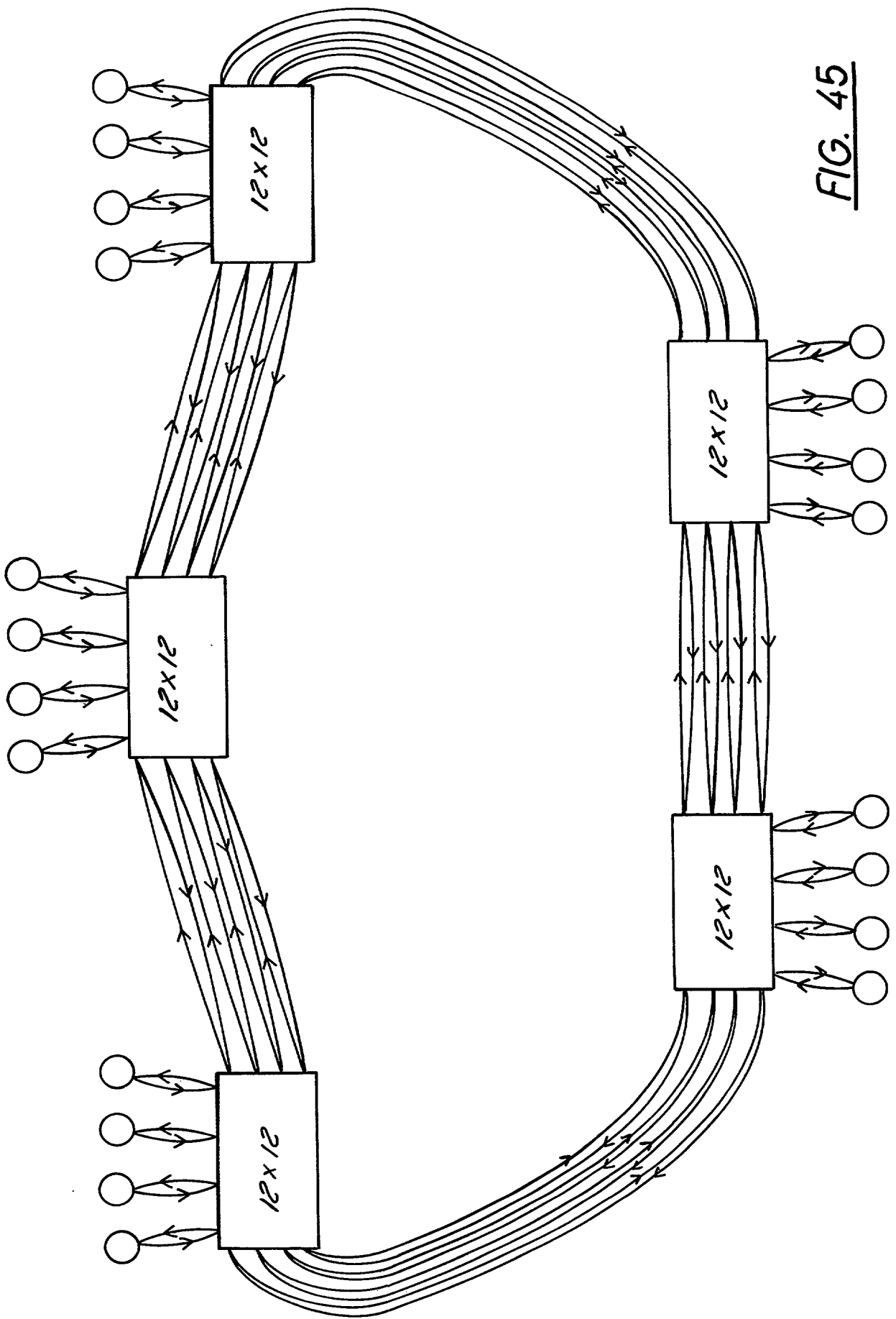


FIG. 45

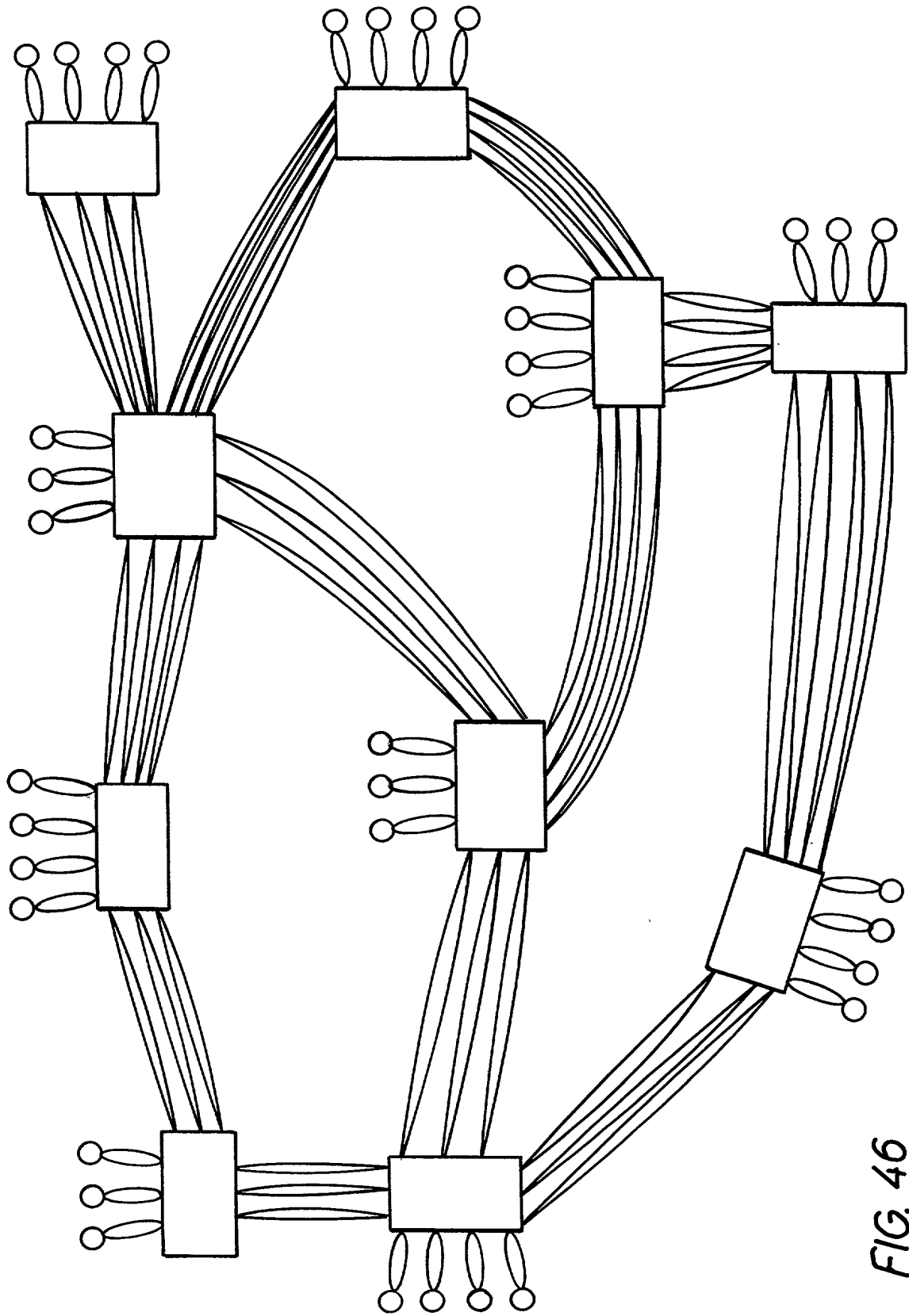


FIG. 46